

Source: T1
Title: CR's to TS 34.123-1 v3.0.0 for approval
Agenda item: 6.1
Document for: Approval

This document contains 33 CRs to TS 34.123-1 v3.0.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

CRs due to changes in the core specifications:

T1 Doc	Spec	CR	Rev	Phase	Subject	Cat	Version Current	Version -New
T1-000165	34.123-1	001		R99	Idle mode test cases	F	3.0.0	3.1.0
T1-000169	34.123-1	002		R99	Section 8, RRC Tests: RLCSIZE	C	3.0.0	3.1.0
T1-000170	34.123-1	003		R99	Section 8, RRC Tests: HFN	C	3.0.0	3.1.0
T1-000171	34.123-1	004		R99	Section 8, RRC Tests: RLCParam	C	3.0.0	3.1.0
T1-000172	34.123-1	005		R99	Section 8, RRC Tests: RBIdentity	C	3.0.0	3.1.0
T1-000173	34.123-1	006		R99	Section 8, RRC Tests: TrCHParam	C	3.0.0	3.1.0
T1-000174	34.123-1	007		R99	Section 8, RRC Tests: UECapability	C	3.0.0	3.1.0
T1-000175	34.123-1	008		R99	Section 8, RRC Tests: RBMapping	C	3.0.0	3.1.0
T1-000176	34.123-1	009		R99	Section 8, RRC Tests: PagingCause	C	3.0.0	3.1.0
T1-000177	34.123-1	010		R99	Section 8, RRC Tests: RRCConnRelease-TM	B	3.0.0	3.1.0
T1-000178	34.123-1	011		R99	Section 8, RRC Tests: SignallingRelease	B	3.0.0	3.1.0
T1-000179	34.123-1	012		R99	Section 8, RRC Tests: CipheringAndIntegrity	C	3.0.0	3.1.0
T1-000180	34.123-1	013		R99	Section 8, RRC Tests: Countercheck_rev	B	3.0.0	3.1.0
T1-000181	34.123-1	014		R99	Section 8, RRC Tests: RLCInfo	C	3.0.0	3.1.0
T1-000182	34.123-1	015		R99	Section 8, RRC Tests: CompressedMode	C	3.0.0	3.1.0
T1-000183	34.123-1	016		R99	Section 8, RRC Tests: SIB	F	3.0.0	3.1.0
T1-000184	34.123-1	017		R99	Section 8, RRC Tests: PhyCH	D	3.0.0	3.1.0
T1-000185	34.123-1	018		R99	Section 8, RRC Tests: Measurement	C	3.0.0	3.1.0
T1-000186	34.123-1	019		R99	Section 8, RRC Tests: FailureCases	C	3.0.0	3.1.0
T1-000187	34.123-1	020		R99	Section 8, RRC Tests: TFCS	C	3.0.0	3.1.0
T1-000188	34.123-1	021		R99	Section 8, RRC Tests: DPCHFrameOffset	C	3.0.0	3.1.0
T1-000189	34.123-1	022		R99	Section 8, RRC Tests: ReEstablishmentTimer	C	3.0.0	3.1.0
T1-000206	34.123-1	023		R99	Section 8, RRC Tests: InterFrequencyHardHandOver	F	3.0.0	3.1.0
T1-000211	34.123-1	024		R99	clause 12.4.1.5 "Routing area updating / abnormal cases / attempt counter check / miscellaneous reject causes"	C	3.0.0	3.1.0
T1-000209	34.123-1	033		R99	clause 12.6 "PS authentication and ciphering"	C	3.0.0	3.1.0

CRs due to adding/updating/correction of tests:

T1 Doc	Spec	CR	Rev	Phase	Subject	Cat	Version Current	Version -New
T1-000208	34.123-1	025		R99	SM test cases	C	3.0.0	3.1.0
T1-000207	34.123-1	026		R99	MM : Authentication	F	3.0.0	3.1.0

T1-000213	34.123-1	027		R99	Update of radio bearer test cases (aligned to GSMA ISG version 1.3)	F	3.0.0	3.1.0
T1-000218	34.123-1	028		R99	MAC tests	B	3.0.0	3.1.0
T1-000166	34.123-1	029		R99	PDCP tests	B	3.0.0	3.1.0
T1-000167	34.123-1	030		R99	BMC tests	B	3.0.0	3.1.0
T1-000168	34.123-1	031		R99	RRC updates	F	3.0.0	3.1.0
T1-000210	34.123-1	032		R99	clause 12.6.1.2 "Authentication rejected"	F	3.0.0	3.1.0

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
34.123-1	CR 001	Current Version: 3.0.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑	↑ CR number as allocated by MCC support team	
For submission to: T#9 list expected approval meeting # here ↑	for approval ☒ for information ☐	strategic ☐ (for SMG use only) non-strategic ☐

Form: CR cover sheet, version 2 for 3GPP and SMG

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Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Ericsson **Date:** 2000-08-28

Subject: Idle mode test cases

Work item:

Category: (only one category shall be marked with an X)	F Correction ☒ A Corresponds to a correction in an earlier release ☐ B Addition of feature ☐ C Functional modification of feature ☐ D Editorial modification ☐	Release: Phase 2 ☐ Release 96 ☐ Release 97 ☐ Release 98 ☐ Release 99 ☒ Release 00 ☐

Reason for change: The Idle mode test cases included in this CR have been modified according to new release of core specifications (2000-06). In addition, new test cases have been added.

Clauses affected: 6.1.1, 6.1.2, 6.1.3, 6.2.2

Other specs affected:	Other 3G core specifications ☐ → List of CRs: Other GSM core specifications ☐ → List of CRs: MS test specifications ☐ → List of CRs: BSS test specifications ☐ → List of CRs: O&M specifications ☐ → List of CRs:	

Other comments:



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<----- double-click here for help and instructions on how to create a CR.

6 Idle mode operations

NOTE: Most of the default settings in the tables below will most likely be merged into TS 34.108, 6.1.

In the following paragraphs some explanatory text is given concerning the nature of the tests in this subclause and the general behaviour of the SS is described.

Since the conformance requirements of most of the tests in this subclause cannot be tested explicitly, testing is done implicitly by testing the UE behaviour from its responses to the SS.

The SS transmits one BCCH per cell as indicated in the initial conditions for each test. These are referred to as Cell 1, Cell 2, etc. Each of these cell control channels are non-combined with DCCHs. It is assumed that the SS can simultaneously transmit [seven] BCCH and monitor [three] random access channels. For inter-frequency tests it is assumed that at least one of the BCCH and one of the monitored random access channels is in a different frequency band from the others. In some cases, a test is performed in multiple stages in order that the requirements can be tested within the above constraints.

For any UE all the carriers are in its supported band(s) of operation.

Unless otherwise stated in the method of test, in all of the tests of this subclause:

- the SS is continuously paging the UE on all cells at the start of the test and does not respond to RACH requests from the UE. Where a test specifies that the UE is not paged in a particular cell, only idle paging is transmitted according to TS 24.008 (see subclause 3.2.2.2);
- the default values of the system information data fields given in table 6.1.3.1 are used;
- the USIM is in the idle updated state in the default location area with a TMSI assigned at the beginning of each test;
- the [UTRA RF Channel Number list] used for the carriers in each test are chosen from those in table 6.1.3.1 with adjacent carriers separated by a minimum of three RF channels.

The absolute accuracy of the UE signal level measurements is assumed to be $[\pm 6 \text{ dB}]$. A difference of at least $[8 \text{ dB}]$ is allowed for cases of discrimination between cell selection criteria (S), immediate cell evaluation reselection criteria (S_n) and cell reselection criteria (S_n) values and 0.

The relative accuracy of the UE signal level measurements is assumed to be $[\pm 3 \text{ dB}]$ for the signal levels used in the tests of this subclause. A difference of at least $[5 \text{ dB}]$ is allowed for cases of discrimination between S or S_n values on different carriers.

NOTE 1: The accuracy of UE signal level measurements is specified in TS 25.101 for FDD and in TS 25.102 for TDD. For all of the tests in this subclause, the signal levels used are greater than $[1 \text{ dB}]$ above reference sensitivity level.

NOTE 2: The tolerance on timers specified in TS 25.304 is $[\pm 10 \text{ \%}]$ except for Treselection where it is $[\pm 2 \text{ seconds}]$. In the tests of this subclause, the test requirements include these tolerances. Consequently, the times stated in the test requirement sometimes differ from the corresponding timer in the conformance requirement.

Where pulsed signals are specified, the SS tolerance on pulse width is $[\pm 2 \text{ \%}]$ and the SS tolerance on power level $[\pm 1 \text{ dB}]$.

Table 6.1.3.1: Default values of the system information fields

[Editor's Note: the table below needs further review and updates according to TS 25.331]

<u>Parameter</u>	<u>TS 25.331 reference</u>	<u>Abbr.</u>	<u>Normal Setting</u>
Cell channel description		-	Any values
MAX retrans		-	1
TX-integer		-	Any value
CELL_BAR_QUALIFY		CBQ	0
CELL_BAR_ACCESS		CBA	0 (not barred)
AC CN		AC	All 0
RE		RE	0 (re-establishment allowed)
NCC		NCC	Any value
Cell Identity		-	Any value
MCC, MNC		PLMN	MS Home PLMN
LAC		LAC	1111 (Hex)
ATT		-	0 (Attach/Detach not allowed)
BS AG BLKS RES		-	Any values
CCCH CONF		-	1 basic physical channel used for CCCH, non-combined with DCCHs.
T3212		-	Any values
BS_PA_MFRMS		BPM	5 frames
Cell Options		-	Any values
Qhyst		CRH	[4 dB]
P_MAX		MTMC	Max. output power of MS
UE_TXPWR_MAX_RACH			Max. TX power level an UE may use when accessing the cell on RACH (read in system information) (dBm)
Qmin		RAM	[-90] (dB or dBm)
Qoffset _{s,n}		CRO	0
[FFS: TEMPORARY_OFFSET]		TO	0
Treselection		PT	0
[FFS: Power Offset]		PO	0
[BA ARFCN]		BA	All 0 except:
			[List of radio channels to be broadcasted in system information TBD]
<u>Cell selection and reselection quality measure</u>		-	CPICH E_c/N_0
<u>UE_TXPWR_MAX_RACH</u>		-	21 dBm
<u>Accepts intra-freq. cell selection</u>		-	No

Editor's note: Note that the table has been extended with the parameters "Cell selection and reselection quality measure", "UE_TXPWR_MAX_RACH" and "Accepts intra-freq. cell selection"

Table 6.1.3.2: Downlink Physical Channels

<u>Physical Channel</u>	<u>Power</u>	<u>NOTE</u>
CPICH	CPICH E_c/I_{or} = -10 dB	
PCCPCH	PCCPCH E_c/I_{or} = -12 dB	
SCCPCH	SCCPCH E_c/I_{or} = -12 dB	
AICH	AICH E_c/I_{or} = -15 dB	
SCH	SCH E_c/I_{or} = -12 dB	This power shall be divided equally between Primary and Secondary Synchronization channels
PICH	PICH E_c/I_{or} = -15 dB	
DPCH	Test dependent power	
OCNS	Necessary power so that total transmit power spectral density of BS (I_{or}) adds to one	

Table 6.1.3.3: Default radio conditions

Parameter	Unit	Value
I_{oc}	$\frac{\text{dBm}}{3.8 \text{ MHz}}$	-70
<u>Propagation Condition</u>		Static

6.1 In a pure 3GPP environment

6.1.1 PLMN selection and reselection

6.1.1.1 Manual mode PLMN selection / re-selection and UE indication of available PLMNs

6.1.1.1.1 Definition

Test to verify that the UE can present the available PLMNs to the user when asked to do so in manual mode and that the displayed PLMNs can be selected. If a "PLMN not allowed" or a PLMN with "LA not allowed" is selected, the UE shall enter limited service.

6.1.1.1.2 Conformance requirement

1. At switch on, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and attempts to perform a Location Registration. The MS shall start its search using the access technology type stored in the RPLMN Last Used Access Technology data field on the SIM. If the RPLMN Last Used Access Technology is not available then an MS capable of GSM access technology shall start its search using GSM access technology.

On recovery from lack of coverage, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and, if necessary attempts to perform a Location Registration.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Manual mode - Here the MS indicates to the user which PLMNs are available. Only when the user makes a manual selection does the MS try to obtain normal service on the VPLMN.

3. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes "Forbidden PLMNs" and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

3.1 HPLMN;

3.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

3.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

3.4 Other PLMN/access technology combinations with received high quality signal in random order;

3.5 Other PLMN/access technology combinations in order of decreasing signal quality.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the forbidden LAI and PLMN lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

4. To prevent repeated attempts to have roaming service on a not allowed LA, when the MS is informed that an LA is forbidden, the LA is added to a list of "forbidden LAs for roaming" which is stored in the MS. This list is deleted when the MS is switched off or when the SIM is removed. Such area restrictions are always valid for complete location areas independent of possible subdivision into GPRS routing areas.

If a "PLMN not allowed" message is received by an MS in response to an LR request from a VPLMN, that VPLMN is added to a list of "forbidden PLMNs" in the SIM and thereafter that VPLMN will not be accessed by the MS when in automatic mode. A PLMN is removed from the "forbidden" list if, after a subsequent manual selection of that PLMN, there is a successful LR. This list is retained when the MS is switched off or the SIM is removed. The HPLMN shall not be stored on the list of "forbidden PLMNs".

References

1. TS 23.122, 4.4.3.1
2. TS 23.122, 3.1
3. TS 23.122, 4.4.3.1.2
4. TS 23.122, 3.1

NOTE: TS 31.102 defines the USIM fields

6.1.1.1.3 Test purpose

1. To verify that if no RPLMN exists at power-on, the UE shall camp on any acceptable cell and enter the limited service state.
2. To verify that in Manual Network Selection Mode Procedure the UE presents PLMNs in a prioritized order.
3. To verify that if a PLMN with LA rejection "LA not allowed" or "PLMN not allowed" is selected, the UE enters limited service.

6.1.1.1.4 Method of test

Initial conditions

The UE is in manual mode.

The SIM fields EF_{UPLMNsel} (UPLMN selector), EF_{OPLMNsel} (OPLMN selector) and EF_{PHPLMNAT} (Preferred HPLMN Access Technology) shall only contain UTRAN as the Access Technology Identifier.

The SIM fields EF_{UPLMNsel} and EF_{OPLMNsel} shall only contain one PLMN as indicated in the table.

PLMN 1 is the HPLMN (i.e. IMSI). There is no RPLMN stored in the SIM (i.e. field EF_{BCCH}).

The UE is equipped with a SIM containing default values except for those values listed in table [FFS].

Parameters changed from the default values in table 6.1.3.1 and table [FFS].

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>	<u>Cell 3</u>	<u>Cell 4</u>	<u>Cell 5</u>
$\hat{I}_{or}/I_{oc}$	<u>dB</u>	<u>2.5</u>	<u>4.5</u>	<u>7.5</u>		
<u>CPICH Ec/Io</u>	<u>dB</u>	<u>-18</u>	<u>-16</u>	<u>-13</u>	[FFS: High Q signal]	[FFS: Not high Q signal]
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-78</u>	<u>-76</u>	<u>-73</u>		
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>	<u>-20</u>	<u>-20</u>		
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>		
<u>Squal</u>	<u>dB</u>	<u>2</u>	<u>4</u>	<u>7</u>		
<u>Srxlev</u>	<u>dBm</u>	<u>22</u>	<u>24</u>	<u>27</u>		
<u>PLMN</u>		<u>PLMN 1</u>	<u>PLMN 2</u>	<u>PLMN 3</u>	<u>PLMN 4</u>	<u>PLMN 5</u>
<u>SIM field for storing PLMN</u>		<u>EF_{IMSI} (IMSI)</u>	<u>EF_{UPLMNsel} (UPLMN selector)</u>	<u>EF_{OPLMNsel} (OPLMN selector)</u>	<u>Other PLMN than on the SIM</u>	<u>Other PLMN than on the SIM</u>

Test procedure

- The SS activates cells 1-4
- The UE is switched on
- The SS waits until UE says “Emergency calls only”
- The UE is requested to display the PLMN list. PLMN 1 is selected manually
- The SS sends SYSTEM INFORMATION to the UE to inform it that PLMN 1 belongs to a “LA not allowed”
- The SS waits until UE says “Emergency calls only”
- Step d-g) is repeated except that in d), PLMN 2 is selected and in e), the UE is informed that PLMN 2 belongs to a “PLMN not allowed”
- Step d-g) is repeated except that in d), PLMN 3 is selected and in e), the UE is informed that PLMN 3 belongs to a “LA not allowed”
- Step d-g) is repeated except that in d), PLMN 4 is selected and in e), the UE is informed that PLMN 4 belongs to a “LA not allowed”
- Step d-g) is repeated except that in d), PLMN 5 is selected and in e), the UE is informed that PLMN 5 belongs to a “LA not allowed”

6.1.1.1.5 Test Requirements

- In step d), the selected PLMN shall be displayed as PLMN 1 within 2 min.

[Editor’s note: The 2 min. must be confirmed]

- In step g), the selected PLMN shall be displayed as PLMN 2 within 2 min.

- In step h), the selected PLMN shall be displayed as PLMN 3 within 2 min.

- In step i), the selected PLMN shall be displayed as PLMN 4 within 2 min.

- In step i), the selected PLMN shall be displayed as PLMN 5 within 2 min.

[Editor’s note: The time 2 min is taken from the GSM 11.10-1, test case 26.3.4]

[Editor’s note: It is assumed that the displayed PLMN reflects the cell camped on and that it is not necessary to test that the UE actually camps on that cell]

6.1.1.2 Manual mode PLMN selection / reselection; independence of RF level and preferred PLMN

6.1.1.2.1 Definition

Test to verify that in Manual Network Selection Mode, the UE is able to obtain normal service on a PLMN which is neither the better nor a preferred PLMN and that it tries to obtain service on a VPLMN if and only if the user selects it manually.

6.1.1.2.2 Conformance requirement

1. ~~At switch on, the MS selects and attempts to perform a Location Registration on the registered PLMN, if it exists.~~
At switch on, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and attempts to perform a Location Registration. The MS shall start its search using the access technology type stored in the RPLMN Last Used Access Technology data field on the SIM. If the RPLMN Last Used Access Technology is not available then an MS capable of GSM access technology shall start its search using GSM access technology.

On recovery from lack of coverage, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and, if necessary attempts to perform a Location Registration.
~~On recovery from lack of coverage, the MS selects the registered PLMN (if it exists) and, if necessary attempts to perform a Location Registration.~~

If successful registration is achieved, the MS indicates the selected PLMN.

-If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Manual mode - Here the MS indicates to the user which PLMNs are available. Only when the user makes a manual selection does the MS try to obtain normal service on the VPLMN.
3. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes "Forbidden PLMNs" and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

1.1 HPLMN;

1.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

1.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

1.4 Other PLMN/access technology combinations with received high quality signal in random order;

1.5 Other PLMN/access technology combinations in order of decreasing signal quality.
~~The user may select his desired PLMN and the MS then initiates registration on this PLMN. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the forbidden LAI and PLMN lists.~~

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the forbidden LAI and PLMN lists.

References

1. TS 23.122, 4.4.3.1
2. TS 23.122, 3.1
3. TS 23.122, 4.4.3.1, ~~2B~~

NOTE: TS 31.102 defines the USIM fields

6.1.1.2.3 Test purpose

1. To verify that the selected PLMN at switch-on is the H~~R~~PLMN
2. To verify that in Manual Network Selection Mode Procedure the UE tries to obtain service on a VPLMN if and only if the user selects it manually
3. To verify that the UE is able to obtain normal service on a PLMN which is neither the better nor a preferred PLMN.

6.1.1.2.4 Method of test

Initial conditions

The UE is in manual mode.

~~The RPLMN is PLMN 1 which is also the HPLMN.~~

~~The preferred PLMN list on the SIM contains PLMN 3 (different MCC-MNC) but not PLMN 2.~~

PLMN 1 is the HPLMN (i.e. IMSI). There is no RPLMN stored in the SIM (i.e. field EF_{BCCH}).

PLMN 2 is not contained in any preferred PLMN list on the SIM.

PLMN 3 is contained in the UPLMN selector list on the SIM and has a different MCC-MNC from PLMN 1.

The UE is equipped with a SIM containing default values except for those values listed in table [FFS].

Parameters changed from the default values in table 6.1.3.1 and table [FFS].

Parameter	Unit	Cell 1			Cell 2
		T1	T2	T3	
<u>UTRA RF Channel Number</u>		<u>UARFCN 1</u>			<u>UARFCN 2</u>
<u>$\hat{I}_{or}/I_{oc}$</u>	<u>dB</u>	<u>-4.74</u>	<u>-</u>	<u>0.02</u>	<u>-7.25</u>
<u>CPICH Ec/Io</u>	<u>dB</u>	<u>-16</u>	<u>OFF</u>	<u>-13</u>	<u>-18</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-85</u>	<u>-</u>	<u>-80</u>	<u>-87</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>	<u>-</u>	<u>-20</u>	<u>-20</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>	<u>-</u>	<u>-100</u>	<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>4</u>	<u>-</u>	<u>7</u>	<u>2</u>
<u>Srxlev</u>	<u>dBm</u>	<u>15</u>	<u>-</u>	<u>20</u>	<u>13</u>
<u>PLMN</u>		<u>PLMN 1</u>	<u>-</u>	<u>PLMN 3</u>	<u>PLMN 2</u>

[Editor's note: MCC and MNC need to be specified here or in a default table]

Test procedure

- a) The SS activates cells 1 and 2 with T1 defined parameters.
- b) The UE is switched on.
- c) PLMN 1 is selected

- ~~de)~~ The SS waits for RRC CONNECTION REQUEST from the UE. A complete Location Update is done.
- ~~ed)~~ Cell 1 is switched off as described for T2.
- ~~fe)~~ The SS waits to see if there is any RRC CONNECTION REQUEST from the UE
- ~~gf)~~ Cell 1 is switched on and set according to T3
- ~~hg)~~ The SS waits to see if there is any RRC CONNECTION REQUEST from the UE
- ~~ih)~~ PLMN 2 is selected manually
- ~~ji)~~ The SS waits for RRC CONNECTION REQUEST from the UE. A complete Location Update is done.
- ~~kj)~~ Cell 2 is switched off
- ~~lk)~~ The SS waits to see if there is any RRC CONNECTION REQUEST from the UE

6.1.1.2.5 Test Requirements

- 1) In step ~~de)~~, there shall be a response on Cell 1 within 2 min. The selected PLMN shall be PLMN 1.
- 2) In step ~~fe)~~, there shall be no response from the UE within 2 min.
- 3) In step ~~hg)~~, there shall be no response from the UE within 2 min.
- 4) In step ~~ji)~~, there shall be a response on Cell 2 within 2 min. The selected PLMN shall be PLMN 2.
- 5) In step ~~lk)~~, there shall be no response from the UE within 2 min.

[Editor's note: The time 2 min is taken from the GSM 11.10-1, test case 26.3.4]

~~6.1.1.3 Manual mode PLMN reselection~~

~~Test to verify that the UE in manual PLMN selection mode selects the PLMN requested by the user.~~

~~FFS~~

6.1.1.34 Automatic mode PLMN selection

6.1.1.34.1 Definition

Test to verify that in Automatic Network Selection Mode, the UE selects PLMNs in a prioritized order and that a "PLMN not allowed" or a PLMN with "LA not allowed" is not selected.

6.1.1.34.2 Conformance requirement

1. ~~At switch on, the MS selects and attempts to perform a Location Registration on the registered PLMN, if it exists.~~ At switch on, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and attempts to perform a Location Registration. The MS shall start its search using the access technology type stored in the RPLMN Last Used Access Technology data field on the SIM. If the RPLMN Last Used Access Technology is not available then an MS capable of GSM access technology shall start its search using GSM access technology.

On recovery from lack of coverage, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and, if necessary attempts to perform a Location Registration. ~~On recovery from lack of coverage, the MS selects the registered PLMN (if it exists) and, if necessary attempts to perform a Location Registration.~~

If successful registration is achieved, the MS indicates the selected PLMN. If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable, ~~in all of its bands of operation~~ in the following order:

1.1 HPLMN (if not previously selected);

1.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order) ~~Each PLMN in the "PLMN Selector" data field in the SIM (in priority order);~~

1.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order)

1.4 ~~3~~ Other PLMN/access technology combinations with received high quality signal in random order ~~Other PLMNs with received high quality signal in random order;~~

1.5 ~~4~~ Other PLMN/access technology combinations in order of decreasing signal quality ~~All other PLMNs in order of decreasing signal quality.~~

If successful registration is achieved, the MS indicates the selected PLMN.

If registration cannot be achieved because no PLMNs are available and allowable, the MS indicates "no service" to the user, waits until a new PLMN is available and allowable and then repeats the procedure.

If there were one or more PLMNs which were available and allowable, but an LR failure made registration on those PLMNs unsuccessful or an entry in a forbidden LAI list prevented a registration attempt, the MS selects the first such PLMN again and enters a limited service state.

3. To prevent repeated attempts to have roaming service on a not allowed LA, when the MS is informed that an LA is forbidden, the LA is added to a list of "forbidden LAs for roaming" which is stored in the MS. This list is deleted when the MS is switched off or when the SIM is removed. Such area restrictions are always valid for complete location areas independent of possible subdivision into GPRS routing areas.

If a "PLMN not allowed" message is received by an MS in response to an LR request from a VPLMN, that VPLMN is added to a list of "forbidden PLMNs" in the SIM and thereafter that VPLMN will not be accessed by the MS when in automatic mode. A PLMN is removed from the "forbidden" list if, after a subsequent manual selection of that PLMN, there is a successful LR. This list is retained when the MS is switched off or the SIM is removed. The HPLMN shall not be stored on the list of "forbidden PLMNs".

References

1. TS 23.122, 4.4.3.1
2. TS 23.122, 4.4.3.1, 1A
3. TS 23.122, 3.1

NOTE: TS 31.102 defines the USIM fields

6.1.1. 34.3 Test purpose

1. To verify that the selected PLMN at switch-on is the HPLMN ~~if no RPLMN exists~~
2. To verify that in Automatic Network Selection Mode Procedure the UE selects PLMNs in a prioritized order.
3. To verify that a PLMN with LA rejection "LA not allowed" or "PLMN not allowed" is not selected

6.1.1.34.4 Method of test

Initial conditions

The UE is in automatic mode.

~~The RPLMN is PLMN 1 which is also the HPLMN.~~

The SIM fields $EF_{UPLMNsel}$ (UPLMN selector), $EF_{OPLMNsel}$ (OPLMN selector) and $EF_{PHPLMNAT}$ (Preferred HPLMN Access Technology) shall only contain UTRAN as the Access Technology Identifier.

The SIM fields $EF_{UPLMNsel}$ and $EF_{OPLMNsel}$ shall only contain one PLMN as indicated in the table.

PLMN 1 is the HPLMN (i.e. IMSI). There is no RPLMN stored in the SIM (i.e. field EF_{BCCH}).

The UE is equipped with a SIM containing default values except for those values listed in table [FFS].

Parameters changed from the default values in table 6.1.3.1 and table [FFS].

Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
$\hat{I}_{or}/I_{oc}$	dB	2.5	4.5	7.5		
$CPICH_{Ec/Io}$	dB	-18	-16	-13	[FFS: High Q signal]	[FFS: Not high Q signal]
$CPICH_{RSCP}$	dBm	-78	-76	-73		
$Q_{qualmin}$	dB	-20	-20	-20		
$Q_{rxlevmin}$	dBm	-100	-100	-100		
S_{qual}	dB	2	4	7		
S_{rxlev}	dBm	22	24	27		
PLMN		PLMN 1	PLMN 2	PLMN 3	PLMN 4	PLMN 5
SIM field for storing PLMN		EF_{IMSI} (IMSI)	$EF_{UPLMNsel}$ (UPLMN selector)	$EF_{OPLMNsel}$ (OPLMN selector)	Other PLMN than on the SIM	Other PLMN than on the SIM

[Editor's note: The PLMN characteristics must be specified in terms of UE/SIM parameters]

Test procedure

- a) The SS activates cells 1-4
- b) The UE is switched on.
- ~~c) The SS waits for RRC CONNECTION REQUEST from the UE~~
- c) The SS waits until the selected PLMN is displayed
- d) The SS sends SYSTEM INFORMATION to the UE to inform it that PLMN 1 belongs to a "LA not allowed"
- ~~d) The UE is switched off.~~
- e) The UE is switched on. Any location update request on PLMN 1 is rejected with cause "LA not allowed"
- ~~f) The SS waits for RRC CONNECTION REQUEST from the UE~~
- eg) Step ~~d-c-df~~ is repeated except that in d) the UE is informed that PLMN 1 and 2 are rejected belongs to a "PLMN not allowed"
- fh) Step ~~d-c-df~~ is repeated except that in d) the UE is informed that PLMN 1, 2 and 3 are rejected belongs to a "LA not allowed"
- gi) Step ~~d-c-df~~ is repeated except that in d) the UE is informed that all PLMNs are PLMN 4 rejected belongs to a "LA not allowed"
- h) Step c-d) is repeated except that in d) the UE is informed that PLMN 5 belongs to a "LA not allowed"

- i) The SS waits until “Emergency calls only” is shown

6.1.1.34.5 Test Requirements

- 1) In step c), there shall be a response on Cell 1 within 2 min. the selected PLMN shall be displayed as PLMN 1 within 2 min.
- 2) In step ef), there shall be a response on Cell 2 within 2 min. the selected PLMN shall be displayed as PLMN 2 within 2 min.
- 3) In step fg), there shall be a response on Cell 3 within 2 min. the selected PLMN shall be displayed as PLMN 3 within 2 min.
- 4) In step gh), there shall be a response on Cell 4 within 2 min. the selected PLMN shall be displayed as PLMN 4 within 2 min.
- 5) In step h), the selected PLMN shall be displayed as PLMN 5 within 2 min.
- 6) In step i), the UE shall say “Emergency calls only” within 2 min.

[Editor’s note: The time 2 min is taken from the GSM 11.10-1, test case 26.3.4]

[Editor’s note: It is assumed that the displayed PLMN reflects the cell camped on and that it is not necessary to test that the UE actually camps on that cell]

6.1.1.4 UE will transmit only if PLMN available

6.1.1.4.1 Definition

Test to verify that the UE will not produce any RF transmission if no PLMN is available.

6.1.1.4.2 Conformance requirement

The UE shall monitor the DPCCH quality in order to detect a loss of the signal on Layer 1, as specified in TS 25.214. The thresholds Q_{out} and Q_{in} specify at what DPCCH quality levels the UE shall shut its power off and when it may turn its transmitter on respectively. The thresholds are not defined explicitly, but are defined by the conditions under which the UE shall shut its transmitter off and turn it on.

References

1. TS 25.101, 6.4.4 and TS 25.214, 4

6.1.1.4.3 Test purpose

1. To verify that the UE does not give any “Service indication” when no PLMN is available
2. To verify that the UE will not produce any RF transmission when no PLMN is available

6.1.1.4.4 Method of test

Initial conditions

Parameters changed from the default values in table 6.1.3.1 and table [FFS].

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>	<u>Cell 3</u>
$\hat{I}_{or}/I_{oc}$	<u>dB</u>	<u>7.5</u>	<u>4.5</u>	<u>2.5</u>
<u>CPICH E_c/I_o</u>	<u>dB</u>	<u>-13</u>	<u>-16</u>	<u>-18</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-73</u>	<u>-76</u>	<u>-78</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>	<u>-20</u>	<u>-20</u>
<u>Orxlevmin</u>	<u>dBm</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>7</u>	<u>4</u>	<u>2</u>
<u>Srxlev</u>	<u>dBm</u>	<u>27</u>	<u>24</u>	<u>22</u>

Test procedure

- The SS activates the cells 1-3 and monitors them for random access requests from the UE
- The UE is switched on.
- The SS waits for random access request from the UE
- Cells 1-3 are switched off
- The SS shall wait 20 sec. to allow the UE to detect the loss of cells
[Editor's note: 20 sec. is taken from the equiv. GSM test case and must be confirmed]
- By MMI, an attempt to originate a call is made
- By MMI, an attempt to originate an emergency call is made (only if UE supports speech)

6.1.1.4.5 Test Requirements

- In step c), there shall be a response on cell 1 within 2 min.
- In step f) and g), the UE shall not produce any RF output, neither give any "service indication".
[Editor's note: 2 min. is taken from the equiv. GSM test case and must be confirmed]

6.1.2 Radio access mode selection and reselection

6.1.2.1 UE selects radio access mode (FDD/TDD) on request by the servicing network

Tests to verify that the UE selects the radio access mode requested by the servicing network.

FFS

6.1.3 Cell selection and reselection

In the following paragraphs some explanatory text is given concerning the nature of the tests in this subclause and the general behaviour of the SS is described.

Since the conformance requirements of most of the tests in this subclause cannot be tested explicitly, testing is done implicitly by testing the UE behaviour from its responses to the SS.

The SS transmits one BCCH per cell as indicated in the initial conditions for each test. These are referred to as Cell 1, Cell 2, etc. Each of these cell control channels are non-combined with DCCHs. It is assumed that the SS can

simultaneously transmit [seven] BCCH and monitor [three] random access channels. For inter frequency tests it is assumed that at least one of the BCCH and one of the monitored random access channels is in a different frequency band from the others. In some cases, a test is performed in multiple stages in order that the requirements can be tested within the above constraints.

For any UE all the carriers are in its supported band(s) of operation.

Unless otherwise stated in the method of test, in all of the tests of this subclause:

- the SS is continuously paging the UE on all cells at the start of the test and does not respond to RACH requests from the UE. Where a test specifies that the UE is not paged in a particular cell, only idle paging is transmitted according to TS 24.008 (see subclause 3.2.2.2);
- the default values of the system information data fields given in table 6.1.3.1 are used;
- the USIM is in the idle updated state in the default location area with a TMSI assigned at the beginning of each test;
- the [UTRA RF Channel Number list] used for the carriers in each test are chosen from those in table 6.1.3.1 with adjacent carriers separated by a minimum of three RF channels.

The absolute accuracy of the UE signal level measurements is assumed to be [± 6 dB]. A difference of at least [8 dB] is allowed for cases of discrimination between cell selection criteria (S), immediate cell evaluation reselection criteria (S_n) and cell reselection criteria (S_n) values and 0.

The relative accuracy of the UE signal level measurements is assumed to be [± 3 dB] for the signal levels used in the tests of this subclause. A difference of at least [5 dB] is allowed for cases of discrimination between S or S_n values on different carriers.

NOTE 1: The accuracy of UE signal level measurements is specified in TS 25.101 for FDD and in TS 25.102 for TDD. For all of the tests in this subclause, the signal levels used are greater than [1 dB] above reference sensitivity level.

NOTE 2: The tolerance on timers specified in TS 25.304 is [± 10 %] except for $T_{\text{reselction}}$ where it is [± 2 seconds]. In the tests of this subclause, the test requirements include these tolerances. Consequently, the times stated in the test requirement sometimes differ from the corresponding timer in the conformance requirement.

Where pulsed signals are specified, the SS tolerance on pulse width is [± 2 %] and the SS tolerance on power level [± 1 dB].

Table 6.1.3.1: Default values of the system information fields

[Editor's Note: the table below needs further review and updates according to TS 25.331]

Parameter	TS-25.331 reference	Abbr.	Normal Setting
Cell channel description		-	Any values
MAX-retrans		-	1
TX-integer		-	Any value
CELL_BAR_QUALIFY		CBQ	0
CELL_BAR_ACCESS		CBA	0 (not barred)
AC-CN		AC	All 0
RE		RE	0 (re-establishment allowed)
NCC		NCC	Any value
Cell Identity		-	Any value
MCC, MNC		PLMN	MS Home-PLMN
LAC		LAC	1111 (Hex)
ATT		-	0 (Attach/Detach not allowed)
BS_AG_BLKES_RES		-	Any values
CCCH_CONF		-	1 basic physical channel used for CCCH, non-combined with DCCHs.
T3212		-	Any values
BS_PA_MFRMS		BPM	5 frames
Cell Options		-	Any values
Qhyst		CRH	[4 dB]
P_MAX		MTMC	Max. output power of MS
UE_TXPWR_MAX_RACH			Max. TX power level an UE may use when accessing the cell on RACH (read in system information) (dBm)
Qmin		RAM	[-90] (dB or dBm)
Qoffset _{s,n}		CRO	0
[FFS: TEMPORARY_OFFSET]		TO	0
Tresselection		PT	0
[FFS: Power Offset]		PO	0
[BA-ARFCN]		BA	All 0 except:
			[List of radio channels to be broadcasted in system information TBD]

6.1.3.1 Cell selection

6.1.3.1.1 Definition

Test to verify that the UE is capable of selecting a cell that fulfils the “suitable” cell criteria. The test covers both Initial and Stored cell selection.

6.1.3.1.2 Conformance requirement

1. Cell selection procedure to find a suitable cell to camp on:

- 1.1 Create a candidate list of potential cells to camp on, using:

- 1.1.1 Initial Cell Selection procedure; or
- 1.1.2 Stored Information Cell Selection procedure

- 1.2 For each cell on the candidate list, measure the quality value, $Q_{meas,LEV}$. For each cell on the candidate list, calculate the cell selection value, S , and the quality value, Q_{meas} .

- 1.3 For each cell on the candidate list calculate the cell selection value, S_{qual} and S_{rxlev}

Rank the cells with $S > 0$ from the highest Q_{meas} value.

- 1.4 Rank the cells and select the best cell. Check if the cell with the highest Q_{meas} value fulfils all requirements for a suitable cell. If so, choose this cell to camp on. If this cell does not fulfil all requirements for a suitable cell, this cell and all cells on the same frequency shall be removed as candidates for cell selection, and ranking the cells with $S > 0$ from the highest Q_{meas} value shall be repeated.

1.5 Select the cell that fulfils the criteria $Q_{\text{map},n} > Q_{\text{map},s} + Q_{\text{offsets},n}$ best. Check if the selected cell fulfils all requirements for a suitable cell. If so, choose this cell to camp on. If this cell does not fulfil all requirements for a suitable cell, this cell and all cells on the same frequency shall be removed as candidates for cell selection in case the barred cell does not accept intra-frequency cell selection and re-selection. On the other hand, in case the barred cell accepts intra-frequency cell selection and re-selection, only the barred cell shall be removed as candidate for cell selection, and step 1.4 shall be repeated for the remaining cells.

2. A suitable cell must fulfil all the following requirements.

2.1 ~~(1)~~ The cell is part of the selected PLMN.

2.2 ~~(2)~~ The cell is not barred [details are FFS].

2.3 ~~(3)~~ The cell is not part of a forbidden registration area [details are FFS].

2.4 ~~(4)~~ The cell selection criteria are fulfilled ($S_{\text{qual}} > 0$ and $S_{\text{rxlev}} > 0$)

2.5 ~~(5)~~ The SoLSA criteria are fulfilled [FFS].

2.6 ~~(6)~~ The cell is not an operator-only cell, unless the UE has those access rights.

3. The UE shall be able to calculate correctly the cell selection ~~criteria value~~, S_{qual} and S_{rxlev}

References

1. TS 25.304, 5.2.2.1.1
2. TS 25.304, 4.3
3. TS 25.304, 5.2.2.1.2

6.1.3.1.3 Test purpose

Test to verify that the UE selects the correct cell according to the requirements for cell selection:

1. To verify that the UE selects suitable cells in descending order of received signal strength Q_{meas} according to conformance requirement 1.
2. To verify that:
 - 1.1 The UE does not select a cell of a PLMN, which is not the selected PLMN.
 - 1.2 The UE does not select a cell, which is barred.
 - 1.3 The UE does not select a cell with $S < 0$.

The conformance requirement 2.3 (forbidden registration area), 2.5 (SoLSA) and 2.6 (operator-only cell) is not covered by the test.

6.1.3.1.4 Method of test

Initial conditions

The relative RF signal to total interference ratio at the UE ($CPICH\_Ec/I_o$) between the cells shall be:

Cell 1 (barred) > Cell 2 ($S < 0$) > Cell 3 > Cell 4

Cell 1 must be on a different frequency than the other cells because it is barred (conformance requirement 1.4).

Parameters changed from the default values in table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>	<u>Cell 3</u>	<u>Cell 4</u>
<u>UTRA RF Channel Number</u>		<u>UARFCN 1</u>	<u>UARFCN 2</u>	<u>UARFCN 2</u>	<u>UARFCN 2</u>
<u>$\hat{I}_{or}/I_{oc}$</u>	<u>dB</u>	<u>5.9</u>	<u>7.5</u>	<u>4.5</u>	<u>2.5</u>
<u>CPICH Ec/Io</u>	<u>dB</u>	<u>-11</u>	<u>-13</u>	<u>-16</u>	<u>-18</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-74</u>	<u>-73</u>	<u>-76</u>	<u>-78</u>
<u>Qualmin</u>	<u>dB</u>	<u>-20</u>	<u>-5</u>	<u>-20</u>	<u>-20</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>9</u>	<u>-8</u>	<u>4</u>	<u>2</u>
<u>Srxlev</u>	<u>dBm</u>	<u>26</u>	<u>27</u>	<u>24</u>	<u>22</u>
<u>CellBarred</u>		<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>

Test procedure

- The SS activates the cells 1-4 and monitors cell 2, 3 and 4 for random access requests from the UE
- The UE is switched on.
- The SS waits for random access request from the UE
- The UE is switched off.
- The SS monitors cell 1, 2 and 3 for random access requests from the UE.
- The UE is switched on.
- The SS waits to see if there is any random access requests from the UE.
- The stored information cell selection list in the UE is deleted and the UE is switched off.
- Step a-g) is repeated except that Cell 1 is set to belong to a different PLMN instead of being barred.
- Step a-g) is repeated except that Qrxlevmin is set to -70 instead of being barred. Srxlev will be negative.

6.1.3.1.5 Test requirements

- In step c), the first response from the UE shall be on cell 3 within 33 seconds There shall be no response from the UE on cell 2 (Initial cell selection)

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]

- In step g), there shall be no response from the UE on cell 1 or 2 within 33 seconds (Stored cell selection)

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the stored cell selection time. UMTS should not have worse performance than GSM]

- In i) the responses shall be as in previous test requirements 1) and 2).

- In j) the responses shall be as in previous test requirements 1) and 2).

6.1.3.2 Cell selection on release of DCCH and DTCH

FFS.

6.1.3.3 Cell reselection

6.1.3.3.1 Definition

Test to verify that the UE performs the cell reselection correctly for intra/inter-frequency cells if the serving cell becomes barred or $S < 0$.

6.1.3.3.2 Conformance requirement

1. While camped on a cell of the selected PLMN ("camped normally"), the UE may need to select a different cell ("normal cell reselection" state). The following events trigger a cell reselection:

1.1 Time for cell re-selection evaluation

1.2 Cell selection criterion S is not fulfilled

1.3 Cell has become barred or forbidden

~~1.1 Better cell is found~~

~~1.2 $S \leq 0$~~

~~1.3 Downlink signalling failure~~

[Editor's note: 1.2 and 1.3 will most likely merge in next TS 25.304 release]

~~1.4 Cell has become barred or forbidden [details are FFS]~~

In case 1.2 and 1.3, ~~and 1.4~~ the parameters Qhyst and Treselection shall not be considered in the criteria.

2. The UE shall perform a cell reselection if a non-serving cell is evaluated to be better than the serving cell. The best cell is the cell with the highest cell-ranking criterion R and (Squal > 0, Srxlev > 0). The UE shall reselect the new cell, if the cell reselection criteria are fulfilled during a time interval Treselection.
3. Non-suitable cells (Squal > 0 or Srxlev > 0) ~~with S > 0~~: If the best cell according to cell reselection criteria, does not fulfil all requirements for a suitable cell, that cell, together with all cells on that frequency shall be removed as candidate for cell re-selection.
4. Cell re-selection is correct if within Nt [FFS] seconds the UE re-reselects a new cell, which fulfils the cell re-selection criteria and stays steady on that cell until the channel conditions are changed again.

References

1. TS 25.304, 5.2.2.4.1
2. TS 25.304, 5.2.2.4.5
3. TS 25.304, 5.2.2.4.4
4. TS 25.133, 4.3.2.1.2 ~~4.3~~

6.1.3.3.3 Test purpose

1. To verify that the UE meets conformance requirement 1.2 and 1.3~~4~~
2. To verify that the UE meets conformance requirement 2
3. To verify that the UE meets conformance requirement 3

NOTE: Interfrequency cell reselection caused by a better cell being found (conformance requirement 1.1 and 4) is tested in TS 34.121, 8.2.3.2 Cell re-selection multi carrier multi cell case. Conformance requirement 4 applies also to the cell reselection criteria $S < 0$.

6.1.3.3.4 Method of test

Initial conditions

Treselection, Qhyst, Qoffset, TEMP_OFFSET and PENALTY_TIME are not used, so the cell-ranking criterion R equals Q.

The relative RF signal to total interference ratio at the UE ($CPICH_{Ec/I_o}$) between the cells shall be:

Cell 1 > Cell 2 > Cell 3 > Cell 4

Cells 1 and 2 are on a different frequency than the other cells (Cell 1 will become barred and therefore both cells 1 and 2 removed from the candidate list)

Parameters changed from the default values in table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>	<u>Cell 3</u>	<u>Cell 4</u>
<u>UTRA RF Channel Number</u>		<u>UARFCN 1</u>	<u>UARFCN 1</u>	<u>UARFCN 2</u>	<u>UARFCN 2</u>
<u>$\hat{I}_{or}/I_{oc}$</u>	<u>dBm</u>	<u>4.4</u>	<u>2.4</u>	<u>-5.3</u>	<u>-7.3</u>
<u>$CPICH_{Ec/I_o}$</u>	<u>dB</u>	<u>-13</u>	<u>-15</u>	<u>-17</u>	<u>-19</u>
<u>$CPICH_{RSCP}$</u>	<u>dBm</u>	<u>-76</u>	<u>-78</u>	<u>-85</u>	<u>-87</u>
<u>$Q_{qualmin}$</u>	<u>dB</u>	<u>-20</u>	<u>-20</u>	<u>-20</u>	<u>-20</u>
<u>$Q_{rxlevmin}$</u>	<u>dBm</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>
<u>S_{qual}</u>	<u>dB</u>	<u>7</u>	<u>5</u>	<u>3</u>	<u>1</u>
<u>S_{rxlev}</u>	<u>dBm</u>	<u>24</u>	<u>22</u>	<u>15</u>	<u>13</u>

Test procedure

- The SS activates cells 1, 2, 3 and 4. The SS monitors cells 1, 2 and 3 for random access requests from the UE.
- The UE is switched on.
- The SS waits for random access request from the UE
- The SS sets Cell 1 to be barred
- The SS waits for random access request from the UE
- The stored information cell selection list in the UE is deleted and the UE is switched off.
- Step a-e) is repeated except that in step d), ~~$Q_{qualminmin}$~~ is increased to -10-60 dB, so S will become negative instead of the cell being barred while maintaining the same RF level.
- The stored information cell selection list in the UE is deleted and the UE is switched off.
- Step a-e) is repeated except that in step d), Cell 1 shall be on another PLMN while maintaining the same RF level.

6.1.3.3.5 Test requirements

- In step c), the UE shall respond on Cell 1 within 33 seconds

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]

- In step e), the UE shall respond on Cell 3 within 12 seconds

NOTE 1: 1280 msec. for DRX cycle + 1280 msec. for system info scheduling + 5 sec. actual reselection time + 1280 msec. for reading neighbour BCCH + 25%. Allow 12 sec.

- 3) The responses in step g) shall first be a response on Cell 1 and then a response on Cell 2.
- 4) The responses in step h) shall first be a response on Cell 1 and then a response on Cell 3.

6.1.3.4 Cell reselection using reselection timing parameters

6.1.3.4.1 Definition

Test to verify that the UE performs the cell reselection correctly if system information parameters Qoffset, Qhyst, TEMP_OFFSET, PENALTY_TIME and Treselection are applied for non-hierarchical cell structures.

6.1.3.4.2 Conformance requirement

1. While camped on a cell of the selected PLMN ("camped normally"), the UE may need to select a different cell ("normal cell reselection" state). The following events trigger a cell reselection:

1.1 Time for cell re-selection evaluation

1.2 Cell selection criterion S is not fulfilled

1.3 Cell has become barred or forbidden

~~1.1 Better cell is found~~

~~1.2 $S \leq 0$~~

~~1.3 Downlink signalling failure~~

[Editor's note: 2.2 and 2.3 will most likely merge in next TS 25.304 release]

~~1.4 Cell has become barred or forbidden [details are FFS]~~

In case 1.2, and 1.3, ~~and 1.4~~ the parameters Qhyst and Treselection shall not be considered in the criteria.

2. The UE shall perform a cell reselection if a non-serving cell is evaluated to be better than the serving cell. The best cell is the cell with the highest cell-ranking criterion R and (Squal>0, Srxlev>0). The UE shall reselect the new cell, if the cell reselection criteria are fulfilled during a time interval Treselection.
3. The cell-ranking criterion R is calculated using the Qoffset, Qhyst, TEMP_OFFSET, PENALTY_TIME and Treselection parameters.
4. Cell re-selection is correct if within Nt [FFS] seconds the UE re-reselects a new cell, which fulfils the cell re-selection criteria and stays steady on that cell until the channel conditions are changed again.

References

1. TS 25.304, 5.2.2.4
2. TS 25.304, 5.2.2.4.5
3. TS 25.304, 5.2.2.4.5
4. TS 25.133, 4.3.2.1, ~~21.3~~

6.1.3.4.3 Test purpose

1. To verify conformance requirement 1.1

2. To verify conformance requirement 2

3. To verify conformance requirement 3

NOTE: __Interfrequency cell reselection caused by a better cell being found (conformance requirement 1.1 and 4) is tested in TS 34.121, 8.2.3.2 Cell re-selection multi carrier multi cell case. Conformance requirement 4 applies also to the cell reselection criteria $S < 0$.

6.1.3.4.4 Method of test

Initial conditions

Serving cell: T1: Cell 1, T2: Cell 2, T3: Cell 3

Parameters changed from the default values in table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>		<u>Cell 2</u>		<u>Cell 3</u>	<u>Cell 4</u>
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T3</u>
<u>UTRA RF Channel Number</u>	<u>dB</u>	<u>UARFCN 1</u>		<u>UARFCN 1</u>		<u>UARF CN 2</u>	<u>UARF CN 2</u>
<u>$\hat{I}_{or}/I_{oc}$</u>	<u>dB</u>	<u>-3.71</u>	<u>0.06</u>	<u>-5.71</u>	<u>3.06</u>	<u>5.87</u>	<u>5.87</u>
<u>CPICH E_c/I_o</u>	<u>dB</u>	<u>-16</u>		<u>-18</u>	<u>-13</u>	<u>-11</u>	<u>-11</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-84</u>	<u>-80</u>	<u>-86</u>	<u>-77</u>	<u>-74</u>	<u>-74</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>		<u>-20</u>		<u>-20</u>	<u>-20</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>		<u>-100</u>		<u>-100</u>	<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>4</u>		<u>2</u>	<u>7</u>	<u>9</u>	<u>9</u>
<u>Srxlev</u>	<u>dBm</u>	<u>16</u>	<u>20</u>	<u>14</u>	<u>13</u>	<u>26</u>	<u>26</u>
<u>Qhyst_s</u>	<u>dB</u>	<u>4</u>			<u>0</u>		
<u>Treselection_s</u>	<u>sec</u>	<u>10</u>			<u>10</u>		
<u>PENALTY_TIME_n</u>	<u>sec</u>	<u>-</u>			<u>-</u>	<u>40</u>	<u>60</u>
<u>TEMP_OFFSET_n</u>	<u>dB</u>	<u>-</u>			<u>-</u>	<u>5</u>	<u>5</u>
<u>Qoffset_{s,n}</u>	<u>dB</u>	<u>n=1,2,3,4: 0</u>			<u>n=3,4: 1</u>		
<u>R_s</u>	<u>dB</u>	<u>-12</u>			<u>-13</u>		
<u>R_n</u>	<u>dB</u>	<u>n=2: -18</u>	<u>n=2: -13</u>		<u>n=3,4: -17 to -12</u>		

Note 1: The initial cell selection, after the UE has been switched on, is based on a comparison of the active cells' Q value, not R.

Test procedure

- The SS activates cells 1 and 2 with T1 defined parameters. The UE is not paged on Cell 1. The SS monitors Cell 2 for random access requests from the UE.
- The UE is switched on.
- The SS waits to see if there is any random access request from the UE
- The SS increases the level of Cell 2 to -1365 dB as described for T2.
- The SS waits for random access request from the UE
- The SS sets Qhyst to 2 dB so R_s will be -14 dB

g) The SS waits for random access request from the UE

hf) When the SS receives a response on Cell 2, the SS stops paging in that cell. The parameters are changed as described for T3. The SS activates cells 3 and 4 as described for T3 and continuously pages the UE on these cells. The SS monitors cells 3 and 4 for random access requests from the MS.

ig) The SS waits for random access request from the UE

6.1.3.4.5 Test Requirements

1) In step c), there shall be no response from the UE on Cell 2 within 50 seconds

[Editor's note: The 50 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]

2) In step e), there shall be no response from the UE on Cell 2 within 50 seconds

32) In step ge), the UE shall respond on Cell 2 within 20 seconds

NOTE 1: Actual reselection time of 5 sec. (due to changed RF conditions, conformance req. 4) + Treselection time of 10 sec. + 25%. Allow 20 sec.

43) In step ig), there shall be no response from the UE on Cell 3 within 48 seconds of activating the cells but the UE shall respond on Cell 3 within 75 seconds The response on Cell 3 shall be before any response on Cell 4.

NOTE 2: Minimum time of 48 sec. set by PENALTY_TIME (cell 3) + Treselection time - 2 sec. tolerance.
Maximum time of 75 sec. set by PENALTY_TIME (cell 3) + Treselection time + 1280 msec. for DRX cycle + 1280 msec. for system info scheduling + 5 sec. actual reselection time + 1280 msec. for reading neighbour BCCH + 25%.

6.1.3.5 Cell reselection if HCS is used

FFS.

6.1.3.6 Cell reselection due to UE rejection "LA not allowed"

6.1.3.6.1 Definition

Test to verify that a UE camping on a cell which has a "Regionally restricted service" will select a different cell in order to fulfill the normal service state. This ensures that the UE is camped on a cell from which it can reliably decode downlink data and with which it has a high probability of communications on the uplink.

6.1.3.6.2 Conformance requirement

1. In response to a registration attempt, when receiving an LU reject with cause value "LA not allowed", the UE stores this LAI in a list of "forbidden LAIs for regional provision of service", to prevent repeated attempts to access a cell of the forbidden LA. This list is deleted when the MS is switched off or the SIM is removed. If the MS cannot find a suitable cell, the MS performs the PLMN selection procedure.
2. When the MS is camped on a cell, the LA of which belongs to the list of forbidden LA for regional provision of service, the MS is not allowed to initiate establishment of a CM connection except for an emergency call; it may respond to paging.
3. There are a number of situations in which the MS is unable to obtain normal service from a PLMN. These include:
 - 3.1 Failure to find a suitable cell of the selected PLMN;

3.2 No SIM in the MS;

3.3 A "PLMN not allowed" response to an LR;

3.4 An "illegal MS", "illegal ME" or "IMSI unknown in HLR" response to an LR; (Any SIM in the ME is then considered "invalid".)

Under any of these conditions, the MS attempts to camp on an acceptable cell, irrespective of its PLMN identity, so that emergency calls can be made if necessary. No LR requests are made until a valid SIM is present and either a suitable cell is found or a manual network reselection is performed.

4. The cell reselection procedure shall be triggered in the following cases:

4.1 Time for cell re-selection evaluation;

4.2 Cell selection criterion S is not fulfilled;

4.3 Cell has become barred or forbidden.

In case 4.2 and 4.3, the parameters Qhyst and Treselection shall not be considered in the criteria.

5. Non-suitable cells (Squal > 0 or Srxlev > 0): If the best cell according to cell reselection criteria, does not fulfil all requirements for a suitable cell, that cell, together with all cells on that frequency shall be removed as candidate for cell re-selection.

6. A new LU attempt shall only be performed when a new LA (or new PLMN) is entered according to the cell reselection procedure.

References

1. TS 23.122, 3.2
2. TS 23.122, 3.4.2
3. TS 23.122, 3.5
4. TS 25.304, 5.2.2.4.1
5. TS 25.304, 5.2.2.4.4
6. TS 23.122, Table 2

6.1.3.6.3 Test purpose

1. To verify that if an LU is rejected with cause "LA not allowed" that the LAI of that cell is written into a forbidden list which prevents the UE from performing LU onto another cell in that LA. This is verified indirectly in test purposes 2, 3 and 4.
2. To verify that cell reselection is triggered when the UE receives an LU reject with cause value "LA not allowed"
3. To verify that if no suitable cells exist, the UE will not reject a cell for camping on because that cell is part of a LA in the list of "forbidden LAIs for regional provision of service". This is verified indirectly by making the UE attempt an emergency call and checking that the RRC CONNECTION REQUEST is transmitted on the correct cell.
4. To verify that a new LU attempt will be performed when a new LA (or new PLMN) is entered.

6.1.3.6.4 Method of test

Initial conditions

Treselection, Qhyst, TEMP_OFFSET and PENALTY_TIME are not used.

The relative RF signal to total interference ratio at the UE ($CPICH_{Ec/I_o}$) between the cells shall be:

Cell 1 > Cell 2 > Cell 3

Parameters changed from the default values in table 6.1.3.1 and table [FFS].

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>	<u>Cell 3</u>
$\hat{I}_{or}/I_{oc}$	<u>dB</u>	<u>7.5</u>	<u>4.5</u>	<u>2.5</u>
$CPICH_{Ec/I_o}$	<u>dB</u>	<u>-13</u>	<u>-16</u>	<u>-18</u>
$CPICH_{RSCP}$	<u>dBm</u>	<u>-73</u>	<u>-76</u>	<u>-78</u>
$Q_{qualmin}$	<u>dB</u>	<u>-20</u>	<u>-20</u>	<u>-20</u>
$Q_{rxlevmin}$	<u>dBm</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>
S_{qual}	<u>dB</u>	<u>7</u>	<u>4</u>	<u>2</u>
S_{rxlev}	<u>dBm</u>	<u>27</u>	<u>24</u>	<u>22</u>
$Q_{offset_{s,n}}$	<u>dB</u>		<u>4</u>	
$R_n = Q_n - Q_{offset_{s,n}}$	<u>dB</u>		<u>-20</u>	
LAC		<u>H1111</u>	<u>H2222</u>	<u>H1111</u>
ATT		<u>1</u>	<u>1</u>	<u>1</u>

Test procedure

- a) The SS activates cells 1 and 3. The SS monitors cells 1 and 3 for random access requests from the UE until step g) has been completed. Only idle-paging is sent on all channels.

[Editor's note: Idle paging in this case ?. The UE shall not be paged in any cell]

- b) The UE is switched on.

- c) The SS waits for random access request from the UE

- d) When the UE performs an IMSI attach onto Cell 1 by sending a LOCATION UPDATING REQUEST, the SS shall reject it with cause "LA not allowed".

- e) 30 seconds after the UE has returned to idle mode (RRC CONNECTION RELEASE after LU reject), the UE is manually commanded to set up an emergency call.

[Editor's note: The 30 seconds is taken from GSM as there is no requirement in UMTS. UMTS should not have worse performance than GSM]

- f) The SS waits for RRC CONNECTION REQUEST from the UE

- g) The SS rejects the CM service request from the UE, with a CM service reject message with cause value #17 (Network Failure).

NOTE: Cause values #4 (IMSI unknown in VLR) or #6 (Illegal ME) lead to unwanted behaviour of the mobile.

- h) 10 seconds after the UE has returned to idle mode (channel release after CM service reject), the SS sets $Q_{offset_{s,n}}$ of Cell 2 to 0 so R_n becomes -16.

[Editor's note: The 10 seconds is taken from GSM as there is no requirement in UMTS. UMTS should not have worse performance than GSM]

- i) The SS shall accept any LU on Cell 2.

6.1.3.6.5 Test requirements

1) In step c), the UE shall respond on Cell 1 within 33 sec. of switch-on.

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]

2) In step f), the UE shall access on Cell 3 within 15 seconds of being commanded to set up the emergency call.

[Editor's note: The 15 seconds is taken from GSM as there is no requirement in UMTS. UMTS should not have worse performance than GSM]

3) In step i), the UE shall reselect and access onto Cell 2 requesting an LU within 30 seconds after having activated Cell 2.

[Editor's note: The 30 seconds is taken from GSM as there is no requirement in UMTS. UMTS should not have worse performance than GSM]

6.1.3.7 Cell reselection due to UE rejection "Roaming not allowed in this LA"

6.1.3.7.1 Definition

Test to verify that a UE camping on a cell and receiving a "Roaming not allowed in this LA" will select a different cell in order to fulfill the normal service state. This ensures that the UE is camped on a cell from which it can reliably decode downlink data and with which it has a high probability of communications on the uplink.

6.1.3.7.2 Conformance requirement

1. To prevent repeated attempts to have roaming service on a not allowed LA, when the UE is informed that an LA is forbidden, the LA is added to a list of "forbidden LAs for roaming" which is stored in the UE.

2. If the LR response "Roaming not allowed in this LA" is received, the PLMN Automatic or Manual Mode Selection Procedure is followed, depending on whether the UE is in automatic or manual mode.

3. Cell selection procedure to find a suitable cell to camp on:

3.1 Create a candidate list of potential cells to camp on, using:

3.1.1 Initial Cell Selection procedure; or

3.1.2 Stored Information Cell Selection procedure

3.2 For each cell on the candidate list, measure the quality value, $Q_{meas,LEV}$

3.3 For each cell on the candidate list calculate the cell selection value, S_{qual} and S_{rxlev}

3.4 Rank the cells and select the best cell

3.5 Select the cell that fulfils the criteria $Q_{map,n} > Q_{map,s} + Q_{offsets,n}$ best. Check if the selected cell fulfils all requirements for a suitable cell. If so, choose this cell to camp on. If this cell does not fulfil all requirements for a suitable cell, this cell and all cells on the same frequency shall be removed as candidates for cell selection in case the barred cell does not accept intra-frequency cell selection and re-selection. On the other hand, in case the barred cell accepts intra-frequency cell selection and re-selection, only the barred cell shall be removed as candidate for cell selection, and step 3.4 shall be repeated for the remaining cells.

4. A suitable cell must fulfil certain requirements, among those:

- the cell is not part of a forbidden registration area [details are FFS].

5. A new LU attempt shall only be performed when a new LA (or new PLMN) is entered according to the cell reselection procedure.

References

1. TS 23.122, 3.1
2. TS 23.122, 4.4.5 and 4.3.3 L3
3. TS 25.304, 5.2.2.1.1
4. TS 25.304, 4.3
5. TS 23.122, Table 2

6.1.3.7.3 Test purpose

1. To verify that if an LU is rejected with cause "Roaming not allowed in this LA" that the LAI of that cell is written into a forbidden list which prevents the UE from camping onto any cell in that LA.
2. To verify that if the UE has received the cause "Roaming not allowed in this LA", in response to a LU attempt, the Network Selection Procedure is initiated. This is verified indirectly by test purpose 3, in that the new LA is accessed as part of cell selection.
3. To verify that if an LU is rejected, when attempting LU in a LA with LAI = LAI1, with cause "Roaming not allowed in this LA" and only cells of the selected PLMN are available, the UE will only camp and attempt LU in any LA with LAI $\neq$ LAI1.
4. To verify that a new LU attempt will be performed when a new LA (or new PLMN) is entered.

6.1.3.7.4 Method of test

Initial conditions

The relative RF signal to total interference ratio at the UE ($CPICH_{Ec/I_o}$) between the cells shall be:

Cell 1 > Cell 2

[Editor's note: Do we need different carrier freq. for Cell 1 and 2 ? In the cell selection procedure, all cells on the same freq. as the non-suitable/rejected cell are removed. But in this case, the two cells belong to different LA, so is it still needed to have diff. freq. ?]

[Editor's note: Do both cells belong to the same PLMN ?]

Parameters changed from the default values in table 6.1.3.1 and table [FFS].

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>
$\hat{I}_{or} / I_{oc}$	dB	3.06	0.06
$CPICH_{Ec/I_o}$	dB	-13	-16
$CPICH_{RSCP}$	dBm	-77	-80
$Q_{qualmin}$	dB	-20	-20
$Q_{rxlevmin}$	dBm	-100	-100
S_{qual}	dB	7	4
$S_{rxlevmin}$	dB	23	20
MNC		$MNC \neq$ HPLMN	$MNC \neq$ HPLMN
MCC		MCC of HPLMN	MCC of HPLMN
LAC		H1111	H2222
ATT		1	1

Test procedure

- a) The SS activates cells 1 and 2 and monitors both cells for random access requests from the UE. Only Idle paging is sent on all channels.

[Editor's note: Idle paging in this case ? The UE shall not be paged in any cell]

- b) The UE is switched on.

- c) The SS waits for random access request from the UE

- d) When the UE performs an IMSI attach onto Cell 1 by sending a LOCATION UPDATING REQUEST, the SS shall reject it with cause "Roaming not allowed in this LA".

- e) The SS waits for random access request from the UE

- f) The SS shall accept any LU on Cell 2.

- g) The SS waits to see if there is any random access requests from the UE

6.1.3.7.5 Test requirements

- 1) In step c), the UE shall respond on Cell 1 within 33 sec. of switch-on.

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]

- 2) In step e), the UE shall initiate the Network Selection Procedure and access onto Cell 2 as part of cell selection within 33 sec. from returning to idle mode after the LU reject.

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS. UMTS should not have worse performance than GSM]

- 3) In step g), there shall be no response from the UE within [TBD] sec.

6.1.3.8 Emergency calls**6.1.3.8.1 Definition**

Test to verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.

6.1.3.8.2 Conformance requirement

1. When in a limited service state, the UE shall be able to initiate emergency calls. ~~TS 25.304, 4.3.~~
2. Select the cell that fulfils the $Q_{\text{map},n} > Q_{\text{map},s} + Q_{\text{offsets},n}$ best. Check if the selected cell fulfils all requirements for a suitable cell. If so, choose this cell to camp on. If this cell does not fulfil all requirements for a suitable cell, this cell and all cells on the same frequency shall be removed as candidates for cell selection in case the barred cell does not accept intra-frequency cell selection and re-selection. On the other hand, in case the barred cell accepts intra-frequency cell selection and re-selection, only the barred cell shall be removed as candidate for cell selection, and the procedure shall be repeated for the remaining cells. The same applies in cell reselection.

~~Check if the cell with the highest Q_{meas} value fulfils all requirements for a suitable cell. If so, choose this cell to camp on. If this cell does not fulfil all requirements for a suitable cell, this cell and all cells on the same frequency shall be removed as candidates for cell selection and ranking the cells with $S > 0$ from the highest Q_{meas} value shall be repeated. TS 25.304, 5.2.2.1.1, The same applies in cell reselection.~~

3. If the UE is unable to find any suitable cell of selected PLMN using the Initial cell selection procedure, it shall attempt to camp on highest ranked acceptable cell and enter the Camped on any cell state, where it can only obtain limited service.~~If the UE is unable to find any suitable cell using the Initial cell selection procedure, it shall attempt to camp on any acceptable cell, where it can only obtain limited service.~~
4. The UE shall perform a cell reselection if a non-serving cell is evaluated to be better than the serving cell. The best cell is the cell with the highest cell-ranking criterion R and ($S_{qual} > 0$, $S_{rxlev} > 0$). The UE shall reselect the new cell, if the cell reselection criteria are fulfilled during a time interval T_{resel} .
5. If no suitable cell is found, the UE shall attempt to find an acceptable cell of any PLMN, state *Any cell selection*. This state is also entered if a non-access stratum registration procedure is rejected, or if there is no USIM in the UE. If an acceptable cell is found, the UE shall camp on this cell and obtain limited service, state *Camped on any cell*. In this state, the UE shall behave as specified for state *Camped normally*, but typically with a different PLMN. Additionally, the UE shall regularly attempt to find a suitable cell using stored information, trying all radio access technologies that are supported by the UE. If a suitable cell is found, the PLMN is reselected.

When a cell reselection is triggered, the UE shall evaluate the cell reselection criteria based on radio measurements, and if a better cell is found that cell is selected, procedure *Any cell reselection*. The change of cell may imply a change of radio access technology.

References

1. TS 25.304, ~~4.35.2.2.4.4~~
2. TS 25.304, 5.2.2.1.1 and 5.2.2.4.4
3. TS 25.304, 5.2.2.1.1
4. TS 25.304, 5.2.2.4.5
5. TS 25.304, 5.2.1

6.1.3.8.3 Test purpose

1. To verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.
2. To verify that the UE selects a cell with $S > 0$ (acceptable cell) and $CellBarred = 0$ when no suitable cells of the selected PLMN are available.
3. To verify that the UE ranks the cells according to the cell-ranking criterion R which in this test case equals Q as Q_{hyst} , Q_{offset} , $TEMP\_OFFSET$ and $PENALTY\_TIME$ parameters are not used. T_{resel} is not used either.

6.1.3.8.4 Method of test

Initial conditions

The relative RF signal to total interference ratio at the UE ($CPICH_{Ec/I_0}$) between the cells shall be:

Cell 2 ($S < 0$) > Cell 1 (barred) > Cell 3

Parameters changed from Default values table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>	<u>Cell 3</u>
$\hat{I}_{or}/I_{oc}$	<u>dB</u>	<u>4.5</u>	<u>7.5</u>	<u>2.5</u>
<u>CPICH Ec/Io</u>	<u>dB</u>	<u>-16</u>	<u>-13</u>	<u>-18</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-76</u>	<u>-73</u>	<u>-78</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>	<u>-10</u>	<u>-20</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>	<u>-100</u>	<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>4</u>	<u>-3</u>	<u>2</u>
<u>Srxlev</u>	<u>dBm</u>	<u>24</u>	<u>27</u>	<u>22</u>
<u>CellBarred</u>		<u>1</u>	<u>0</u>	<u>0</u>
<u>PLMN</u>		<u>forbidden</u>	<u>forbidden</u>	<u>forbidden</u>

NOTE: All the BCCH cells belong to the same PLMN, which is not the UE's home PLMN and is in the SIM's forbidden PLMN's list.

[Editor's note: PLMN must be replaced with MNC, MCC values]

Test procedure

- The SS activates the cells. The SS monitors for RA attempts from the UE on cells 1, 2 and 3 for the duration of the test.
- The UE is switched on.
- 50 seconds after switch on, an emergency call is initiated on the UE.
- The SS waits for random access request from the UE.
- The SS changes the CellBarred of Cell 1 to 0.
- After 12 seconds an emergency call is initiated on the UE.

NOTE: 1280 msec. for DRX cycle + 1280 msec. for system info scheduling + 5 sec. actual reselection time + 1280 msec. for reading neighbour BCCH + 25%. Allow 12 sec.

- The SS waits for random access request from the UE.

6.1.3.8.5 Test requirements

- In step d), the first access from the UE shall be on Cell 3.
- In step g), the first access from the UE shall be on Cell 1.

6.1.3.9 Immediate cell evaluation

6.1.3.9.1 Definition

Test to verify that the UE performs the Immediate cell evaluation procedure correctly and selects the best cell among the cells on the same frequency.

6.1.3.9.2 Conformance requirement

- When UE leaves idle mode, state *Camped normally*, in order to enter connected mode, state *Connected mode*, the UE shall use the *Immediate cell evaluation* procedure (UTRA only) in order to select the best cell on the current frequency for the access attempt. This procedure allows the UE to reduce power consumption spent on radio measurements, still enabling the UE to select the best cell for access, thus minimising the interference in the system. If no suitable cell is found, the UE shall use the *Cell reselection* procedure.

2. The immediate cell evaluation shall be triggered prior to RACH transmission.
3. The transition to the UTRAN Connected Mode from the Idle Mode can only be initiated by the UE by transmitting a request for an RRC Connection ~~CONNECTION REQUEST~~. The event is triggered either by a paging request from the network or by a request from upper layers in the UE. When the UE receives a message from the network that confirms the RRC connection establishment, the UE enters the CELL_FACH or CELL_DCH state of UTRAN Connected Mode.
4. The following steps shall be carried out when an immediate cell evaluation has been triggered:
 - 4.1 The candidate list of potential cells to camp on consists of the cells in the current registration area listed for intra-frequency measurements in system information of the serving cell.
 - 4.2 For each cell on the candidate list, measure the quality value, $Q_{meas,LEV}$. ~~Calculate the Q_{map} value and the S value for each cell on the candidate list.~~
 - 4.3 For each cell on the candidate list calculate the cell selection values, S_{qual} and S_{rxlev} . ~~Select the neighbouring cell that fulfils the immediate cell evaluation criteria best. If the best cell does not fulfil all other requirements for a suitable cell, the UE shall trigger cell re-selection~~
 - 4.4 Rank the cells and select the best cell
 - 4.5 Select the neighbouring cell that fulfils the $Q_{map,n} > Q_{map,s} + Q_{offset,s,n}$ criteria best.
If the best cell does not fulfil all other requirements for a suitable cell, UE shall trigger cell re-selection
5. If more than one neighbouring cell fulfils the criteria, the UE shall choose the cell where the difference between $Q_{map,n}$ and $(Q_{map,s} + Q_{offset})$ is highest. If no neighbouring cell fulfils the criteria, the UE shall keep the serving cell.

References

1. TS 25.304, 5.2.1
2. TS 25.304, 5.2.2.2.1
3. TS 25.331, 9.2
4. TS 25.304, 5.2.2.2.1
5. TS 25.304, 5.2.2.2.2

6.1.3.9.3 Test purpose

To verify that

1. The UE meets conformance requirement 1.
2. The UE meets conformance requirement 4
3. The UE meets conformance requirement 5

6.1.3.9.4 Method of test

Initial conditions

The $Q_{rs} \pm Q_{offset,s,n}$ difference between the cells shall be:

T1: Cell 4 (other freq.) > Cell 1 > Cell 2 > Cell 3

T2: Cell 4 (other freq.) > Cell 2 > Cell 1 > Cell 3

Cell 6 (other freq.) > Cell 2 ($S < 0$) > Cell 3 > Cell 4 > Cell 1 (serving) > Cell 5

Offset parameters are applied to the cell-ranking criterion R to ensure normal cell reselection is not triggered but instead cell evaluation.

Parameters changed from the default values in table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>		<u>Cell 3</u>		<u>Cell 4</u>
			<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
<u>UTRA RF Channel Number</u>		<u>UARFCN 1</u>	<u>UARFCN 1</u>		<u>UARFCN 1</u>		<u>UARFCN 2</u>
$\hat{I}_{or}/I_{oc}$	<u>dBm</u>	<u>7.5</u>	<u>4.5</u>		<u>2.5</u>		<u>5.87</u>
<u>CPICH Ec/Io</u>	<u>dB</u>	<u>-13</u>	<u>-16</u>		<u>-18</u>		<u>-11</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-73</u>	<u>-76</u>		<u>-78</u>		<u>-74</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>	<u>-20</u>		<u>-20</u>		<u>-20</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>	<u>-100</u>		<u>-100</u>		<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>7</u>	<u>4</u>		<u>2</u>		<u>9</u>
<u>Srxlev</u>	<u>dBm</u>	<u>27</u>	<u>24</u>		<u>22</u>		<u>26</u>
<u>Qhyst_s</u>	<u>dB</u>	<u>20</u>	<u>20</u>		<u>20</u>		<u>20</u>
<u>Treselection_s</u>	<u>sec</u>	<u>=</u>	<u>=</u>		<u>=</u>		<u>=</u>
<u>PENALTY_TIME_n</u>	<u>sec</u>	<u>=</u>	<u>=</u>		<u>=</u>		<u>=</u>
<u>TEMP_OFFSET_n</u>	<u>dB</u>	<u>20</u>	<u>20</u>		<u>20</u>		<u>20</u>
<u>CellBarred</u>		<u>0</u>	<u>0</u>		<u>0</u>		<u>0</u>
<u>n</u>		<u>n=2,3:</u>	<u>n=1,3:</u>		<u>n=1,2:</u>		<u>n=1,2,3:</u>
<u>Qoffset_{s,n}</u>	<u>dB</u>	<u>0</u>	<u>0</u>	<u>4</u>	<u>0</u>	<u>4</u>	<u>0</u>
<u>Q_s + Qoffset_{s,n}</u>	<u>dB</u>	<u>-13</u>	<u>-16</u>	<u>-12</u>	<u>-18</u>	<u>-14</u>	<u>-11</u>

Test procedure

- a) The SS activates cell 1-46 according to T1. The SS monitors cells 1, 2 and 3 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access request from the UE
- d) The parameters are changed as described for T2
- e) A call is initiated on the UE
- f) The UE transmits an RRC CONNECTION REQ and the SS sends a RRC CONNECTION CNF.
- g) The SS waits for random access request from the UE

[Editor's note: How do we ensure that the cell is found is Immediate Cell Evaluation and not during Connected Mode ?]

6.1.3.9.5 Test Requirements

- 1) In step c), the UE shall respond on Cell 1 within 33 seconds (Initial cell selection in Idle mode)

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]

- 2) In step g), the UE shall respond on Cell 23 within [TBD] seconds (Immediate Cell Evaluation)

6.1.3.10 Reading SIB prior to RACH transmission

FFS.

6.1.4 Location registration

UE location registration capabilities are tested under clause 9.4 ,.

6.2 Multi-mode environment (2G/3G case)

6.2.1 PLMN selection and reselection

6.2.2 Cell selection and reselection

6.2.2.1 Cell selection; UTRAN / GSM

6.2.2.1.1 Definition

Test to verify that the UE performs cell selection correctly when both a GSM and UTRA network is available.

6.2.2.1.2 Conformance requirement

1. Cell selection procedure to find a suitable cell to camp on:

- 1.1 Create a candidate list of potential cells to camp on, using:

1.1.1 Initial Cell Selection procedure; or

1.1.2 Stored Information Cell Selection procedure

- 1.2 ~~For each cell on the candidate list, measure the quality value, $Q_{meas,LEV}$. For each cell on the candidate list, calculate the cell selection value, S , and the quality value, Q_{meas} .~~

- 1.3 ~~For each cell on the candidate list calculate the cell selection value, S_{qual} and S_{rxlev} . Rank the cells with $S > 0$ from the highest Q_{meas} value.~~

- 1.4 Rank the cells and select the best cell

- 1.5 Select the cell that fulfils the criteria $Q_{map,n} > Q_{map,s} + Q_{offsets,n}$ best. Check if the selected cell fulfils all requirements for a suitable cell. If so, choose this cell to camp on. If this cell does not fulfil all requirements for a suitable cell, this cell and all cells on the same frequency shall be removed as candidates for cell selection in case the barred cell does not accept intra-frequency cell selection and re-selection. On the other hand, in case the barred cell accepts intra-frequency cell selection and re-selection, only the barred cell shall be removed as candidate for cell selection, and step 1.4 shall be repeated for the remaining cells. Check if the cell with the highest Q_{meas} value fulfils all requirements for a suitable cell. If so, choose this cell to camp on. If this cell does not fulfil all requirements for a suitable cell, this cell and all cells on the same frequency shall be removed as candidates for cell selection, and ranking the cells with $S > 0$ from the highest Q_{meas} value shall be repeated.

2. Different types of measurements are used in different radio access technologies and modes for the cell selection and reselection (CPICH Ec/N0 or CPICH SIR in UTRA FDD, P-CCPCH RSCP in UTRA TDD, RXLEV in GSM). Whenever a direct comparison of these measurements is required, mapping functions shall be applied. Mapping functions are used for mapping a certain range of measurement values $Q_{meas,LEV}$ (CPICH Ec/N0,

CPICH_RSCP_LEV, P-CCPCH_RSCP_LEV, RXLEV) Q_{meas} to a representing quality value Q_{map} (0..99, step size 1).

3. In the *Initial cell selection* procedure, the UE shall select one radio access technology and search for a suitable cell. If no suitable cell is found, the UE shall select another radio access technology and search for a suitable cell, and so on. In the *Stored information cell selection* procedure, the UE may use stored information about the selected PLMN. The information may contain information from several radio access technologies.

References

1. TS 25.304, 5.2.2.1.1
2. TS 25.304, 7.1
3. TS 25.304, 5.2.1

6.2.2.1.3 Test purpose

To verify that

1. The UE meets conformance requirement 1.
2. The UE meets conformance requirement 2
3. The UE meets conformance requirement 3

6.2.2.1.4 Method of test

Initial conditions

The relative RF signal to total interference ratio at the UE ($CPICH\_Ec/I_o$) between the cells shall be:

T1: Cell 1 (~~UTRAN~~) < Cell 2 (~~UTRAN~~) < Cell 3 (~~UTRAN~~) < Cell 4 (~~GSM~~) < Cell 5 (~~GSM~~) < Cell 6 (~~GSM~~)

T2: Cell 1 (~~UTRAN~~) > Cell 2 (~~UTRAN~~) > Cell 3 (~~UTRAN~~) > Cell 4 (~~GSM~~) > Cell 5 (~~GSM~~) > Cell 6 (~~GSM~~)

Cell 2 and 5 have $S < 0$, Cell 3 and 6 are barred.

Parameters changed from the default values in table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u> <u>(UTRAN)</u>		<u>Cell 2</u> <u>(UTRAN)</u>		<u>Cell 3</u> <u>(UTRAN)</u>	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
<u>Channel Number</u>		<u>UARFCN 1</u>		<u>UARFCN 1</u>		<u>UARFCN 2</u>	
<u>$\hat{I}_{or}/I_{oc}$</u>	<u>dBm</u>	<u>-5.71</u>	<u>3.06</u>	<u>-3.71</u>	<u>0.06</u>	<u>0.02</u>	<u>-7.25</u>
<u>CPICH_Ec/Io</u>	<u>dB</u>	<u>-18</u>	<u>-13</u>	<u>-16</u>	<u>-16</u>	<u>-13</u>	<u>-18</u>
<u>CPICH_RSCP</u>	<u>dBm</u>	<u>-86</u>	<u>-77</u>	<u>-84</u>	<u>-80</u>	<u>-80</u>	<u>-87</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>		<u>-10</u>			
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>		<u>-100</u>		<u>-100</u>	
<u>Squal</u>	<u>dB</u>	<u>2</u>	<u>7</u>	<u>-6</u>	<u>-6</u>	<u>7</u>	<u>2</u>
<u>Srxlev</u>	<u>dBm</u>	<u>14</u>	<u>23</u>	<u>16</u>	<u>20</u>	<u>20</u>	<u>13</u>
<u>CellBarred</u>		<u>0</u>		<u>0</u>		<u>1</u>	

<u>Parameter</u>	<u>Unit</u>	<u>Cell 4 (GSM)</u>		<u>Cell 5 (GSM)</u>		<u>Cell 6 (GSM)</u>	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
<u>Channel Number</u>		<u>ARFCN 1</u>		<u>ARFCN 2</u>		<u>ARFCN 3</u>	
<u>RF Signal Level</u>	<u>dBm</u>	<u>-70</u>	<u>-95</u>	<u>-60</u>	<u>-100</u>	<u>-50</u>	<u>-105</u>
<u>RXLEV ACCE SS MIN</u>	<u>dBm</u>	<u>-100</u>		<u>-50</u>		<u>-110</u>	
<u>C1</u>	<u>dBm</u>	<u>30</u>	<u>5</u>	<u>-10</u>	<u>-50</u>	<u>60</u>	<u>5</u>
<u>CellBarred</u>		<u>0</u>		<u>0</u>		<u>1</u>	

Test procedure

- The SS activates the cells 1-6 according to T1 and monitors cell 1, 2 and 3 for random access request from the UE
- The UE is switched on.
- The SS waits for random access request from the UE
- The UE is switched off.
- The SS monitors cells 4, 5 and 6 for random access requests from the UE.
- The UE is switched on.
- The SS waits to see if there is any random access request from the UE.
- The stored information cell selection list in the UE is deleted and the UE is switched off.
- Step a-g) is repeated except that the cells are set according to T2 and Cell 1 is set to another PLMN

6.2.2.1.5 Test Requirements

- In step c), the first response from the UE shall be on Cell 1 within 33 seconds. (Initial cell selection)
[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]
- In step g), there shall be no response from the UE on either Cell 4, 5 or 6 within 33 seconds. (Stored Information cell selection)
[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the stored cell selection time. UMTS should not have worse performance than GSM]
- In step i), the first response from the UE shall be on Cell 4. (Initial cell selection) and no other responses ~~the next responses as in test requirement 2)~~

6.2.2.2 Cell reselection; UTRAN to GSM

6.2.2.2.1 Definition

Test to verify that the UE performs cell reselection correctly when both a GSM and UTRAN network is available and if the serving cell becomes barred or $S < 0$.

6.2.2.2.2 Conformance requirement

1. While camped on a cell of the selected PLMN ("camped normally"), the UE may need to select a different cell ("normal cell reselection" state). The following events trigger a cell reselection:

1.1 Time for cell re-selection evaluation

1.2 Cell selection criterion S is not fulfilled

1.3 Cell has become barred or forbidden

~~1.1 Better cell is found~~

~~1.2 $S \leq 0$~~

~~1.3 Downlink signalling failure~~

~~[Editor's note: 2.2 and 2.3 will most likely merge in next TS 25.304 release]~~

~~1.4 Cell has become barred or forbidden [details are FFS]~~

In case ~~1.2 and 1.3~~, ~~2.2, 2.3 and 2.4~~ the parameters Q_{hyst} and $T_{\text{reselction}}$ shall not be considered in the criteria.

2. The UE shall perform a cell reselection if a non-serving cell is evaluated to be better than the serving cell. The best cell is the cell with the highest cell-ranking criterion R and ($S_{\text{qual}} > 0$, $S_{\text{rxlev}} > 0$). The UE shall reselect the new cell, if the cell reselection criteria are fulfilled during a time interval $T_{\text{reselction}}$.
3. Non-suitable cells ($S_{\text{qual}} > 0$ or $S_{\text{rxlev}} > 0$) ~~with $S > 0$~~ : If the best cell according to cell reselection criteria, does not fulfil all requirements for a suitable cell, that cell, together with all cells on that frequency shall be removed as candidate for cell re-selection.
4. Different types of measurements are used in different radio access technologies and modes for the cell selection and reselection (CPICH Ec/N0 or CPICH SIR in UTRA FDD, P-CCPCH RSCP in UTRA TDD, RXLEV in GSM). Whenever a direct comparison of these measurements is required, mapping functions shall be applied. Mapping functions are used for mapping a certain range of measurement values $Q_{\text{meas\_LEV}}$ (CPICH_EC/N0, CPICH_RSCP_LEV, P-CCPCH_RSCP_LEV, RXLEV) Q_{meas} to a representing quality value Q_{map} (0..99, step size 1).

References

1. TS 25.304, 5.2.2.4.1
2. TS 25.304, 5.2.2.4.5
3. TS 25.304, 5.2.2.4.4.
4. TS 25.304, 7.1

6.1.2.2.3 Test purpose

1. To verify that the UE meets conformance requirement 1.2 and 1.4
2. To verify that the UE meets conformance requirement 2
3. To verify that the UE meets conformance requirement 3

NOTE: Cell reselection caused by a better cell being found (conformance requirement 2.1) is tested in TS 34.121, 8.2.3.3 Cell re-selection UTRAN to GSM.

6.2.2.2.4 Method of test

Initial conditions

Treselection, Qhyst, Qoffset, TEMP_OFFSET and PENALTY_TIME are not used, so the cell-ranking criterion R equals Q.

The relative RF signal to total interference ratio at the UE ($CPICH_{Ec/I_o}$) between the cells shall be:

Cell 1 (UTRAN) > Cell 2 (GSM) > Cell 3 (GSM)

Parameters changed from the default values in table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u> <u>(UTRAN)</u>
<u>Channel Number</u>		<u>UARFCN 1</u>
<u>$\hat{I}_{or} / I_{oc}$</u>	<u>dBm</u>	<u>5.87</u>
<u>CPICH Ec/Io</u>	<u>dB</u>	<u>-11</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-74</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>9</u>
<u>Srxlev</u>	<u>dBm</u>	<u>26</u>

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2</u> <u>(GSM)</u>	<u>Cell 3</u> <u>(GSM)</u>
<u>Channel Number</u>		<u>ARFCN 1</u>	<u>ARFCN 2</u>
<u>RF Signal Level</u>	<u>dBm</u>	<u>-80</u>	<u>-90</u>
<u>RXLEV ACCESS</u> <u>MIN</u>	<u>dBm</u>	<u>-100</u>	<u>-100</u>
<u>C1</u>	<u>dBm</u>	<u>20</u>	<u>10</u>

Test procedure

- The SS activates cells 1, 2, and 3. The SS monitors cells 1, 2 and 3 for random access requests from the UE.
- The UE is switched on.
- The SS waits for random access request from the UE
- The SS sets Cell 1 to be barred
- The SS waits for random access request from the UE
- The stored information cell selection list in the UE is deleted and the UE is switched off.
- Step a-e) is repeated except that in step d), $Q_{qualmin}$ is increased to -5[TBD] dB, so S will become negative instead of being barred ~~while maintaining the same RF level.~~
- The stored information cell selection list in the UE is deleted and the UE is switched off.
- Step a-e) is repeated except that in step d), Cell 1 shall be on another PLMN while maintaining the same RF level.

6.2.2.2.5 Test Requirements

- 1) In step c), the UE shall respond on Cell 1 within 33 seconds

[Editor's note: The 33 seconds is taken from GSM as there is no requirement in UMTS to the initial cell selection time. UMTS should not have worse performance than GSM]

- 2) In step e), the UE shall respond on Cell 2 within 12 seconds.

NOTE: 1280 msec. for DRX cycle + 1280 msec. for system info scheduling + 5 sec. actual reselection time + 1280 msec. for reading neighbour BCCH + 25%. Allow 12 sec.

- 3) The responses in step g) shall first be a response on Cell 1 and then a response on Cell 2.
- 4) The responses in step i) shall first be a response on Cell 1 and then a response on Cell 2.

6.2.2.3 Cell reselection timings; GSM to UTRAN

6.2.2.3.1 Definition

Test to verify that the UE meets the cell reselection timing requirements when both a GSM and UTRAN network is available.

6.2.2.3.2 Conformance requirement

1. If the broadcast neighbour cell list includes UTRAN cells or UTRAN frequencies (with or without scrambling code group information), the UE shall, at least every 5 seconds update the value RLA_C for the serving cell and each of the at least 6 strongest non serving GSM cells.
 - 1.1 The UE shall then reselect a suitable UTRAN cell if its measured RSCP value exceeds the value of RLA_C for the serving cell and all of the suitable non-serving GSM cells by the value $XXX_Qoffset$ for a period of 5 seconds and, for FDD, the UTRAN cells measured E_c/N_o value is equal or greater than the value FDD_Qmin .
 - E_c/N_o and RSCP are the measured quantities
 - FDD_Qmin and $XXX_Qoffset$ are broadcast on BCCH of the serving cell. XXX indicates other radio access technology/mode.
 - 1.2 In case of a cell reselection occurring within the previous 15 seconds, $XXX_Qoffset$ is increased by 5 dB.
 - 1.3 Cell reselection to UTRAN shall not occur within 5 seconds after the UE has reselected a GSM from an UTRAN cell if a suitable GSM cell can be found.
 - 1.4 If more than one UTRAN cell fulfils the above criteria, the UE shall select the cell with the greatest $Qmeas$ value.
2. The UE shall be able to identify and select a new best UTRAN cell, which is part of the neighbour cell list, within 30 seconds after it has been activated under the condition that there is only one UTRAN frequency in the neighbour cell list. The allowed time is increased by 30 seconds for each additional UTRAN frequency in the neighbour cell list. However, multiple UTRAN cells on the same frequency in the neighbour cell list does not increase the allowed time.

NOTE: Definitions of measurements are in 3G TS 25.215 and 3G TS 25.101, 3.2 and GSM 05.08, 6.1.

References

1. GSM TS 05.08, 6.6.4
2. GSM TS 05.08, 6.6

6.1.2.3.3 Test purpose

1. To verify that

1.1 The UE meets conformance requirement 1.1 and additionally, that no reselection is performed if the period is less than 5 sec.

1.2 The UE meets conformance requirement 1.2

1.3 The UE meets conformance requirement 1.3

6.2.2.3.4 Method of test

Initial conditions

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (GSM)</u>
<u>Absolute RF Channel Number</u>		<u>ARFCN 1</u>
<u>RF Signal Level</u>	<u>dBm</u>	<u>-75</u>
<u>RXLEV ACCESS MIN</u>	<u>dBm</u>	<u>-100</u>
<u>MS TXPWR MAX CCH</u>	<u>dBm</u>	<u>Max. output power of MS</u>
<u>FDD Qmin</u>	<u>dBm</u>	<u>-20</u>
<u>XXX Qoffset</u>	<u>dBm</u>	<u>5</u>

Parameters changed from the default values in table 6.1.3.1.

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2 (UTRAN)</u>
<u>UTRA RF Channel Number</u>		<u>UARFCN 1</u>
<u>$\hat{I}_{or} / I_{oc}$</u>	<u>dB</u>	<u>-4.74</u>
<u>CPICH Ec/Io</u>	<u>dB</u>	<u>-16</u>
<u>CPICH RSCP</u>	<u>dBm</u>	<u>-85</u>
<u>Qqualmin</u>	<u>dB</u>	<u>-20</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-100</u>
<u>Squal</u>	<u>dB</u>	<u>4</u>
<u>Srxlevmin</u>	<u>dBm</u>	<u>15</u>

Test procedure

NOTE: Step a-c): Test purpose 1.3. Step d-g): test purpose 1.1. Step h-k): test purpose 1.2

a) The SS activates the channels. The UE is not paged on any of the cells.

b) The UE is switched on.

c) After 50 seconds, the SS starts paging continuously on cells 1 and 2 for 20 seconds. The SS monitors cells 1 and 2 for random access requests from the UE.

- d) The SS stops paging on cells 1 and 2 and waits for 20 seconds. (The UE should revert to Cell 1 due to cell reselection).
- e) The SS starts paging continuously on Cell 2.
- f) The SS decreases the transmit level of Cell 1 to -95dBm for a period of 4 s (RSCP will then exceed RXLEV by more than XXX Qoffset) and then changes the level back to the original value.
- g) The UE waits to see if there is any random access requests from the UE on Cell 2
- h) The SS decreases the transmit level of Cell 1 to -95dBm and waits for the UE to access on Cell 2. The SS records the time t from the decrease in the level of Cell 1 to the first response from the UE.
- i) The SS stops paging on Cell 2 and changes the transmit level of Cell 1 back to the original value.
- j) The SS waits 20 seconds. (The UE should revert to Cell 1 due to cell reselection).
- k) The SS decreases the transmit level of Cell 1 to -95dBm. After t+2 seconds, the SS starts paging continuously on Cell 1, changes the level of Cell 1 back to the original level and waits to see if there is any random access request on Cell 1.

6.2.2.3.5 Test Requirements

- 1) In step c), the UE shall transmit 2 random access requests on Cell 1 followed by 2 random access requests on Cell 2. Subsequent random access requests on Cell 1 shall not occur within 4,5 sec of the second random access request on Cell 1.
- 2) In step g), there shall be no access on Cell 2 within 34 seconds of decreasing the level of Cell 1.
- 3) In step h), the UE shall respond on Cell 2.
- 4) In step k), there shall be no response on Cell 1 within 11 seconds after the level of Cell 1 is changed back to the original level.

NOTE: The 11 seconds is derived from (t+15) seconds minimum cell reselection timer minus (t+2) seconds from the start of step k) up to the increase of the level of Cell 1. A further 2 seconds are subtracted to cover for any uncertainty introduced by the random access process occurring after step g).

~~6.2.2 Radio access mode selection and reselection~~

~~[FFS]~~

~~6.2.3 Cell selection and reselection~~

~~6.2.3.1 Cell reselection; Inter Radio Access System; 3G to GSM~~

~~Test to verify that an UE camping on a 3G cell performs cell reselection to a GSM cell when the inter radio access system cell reselection criteria is fulfilled.~~

~~FFS~~

~~6.2.3.2 Cell reselection; Inter Radio Access System; GSM to 3G~~

~~Test to verify that an UE camping on a GSM cell performs cell reselection to a 3G cell when the inter radio access system cell reselection criteria is fulfilled.~~

~~FFS~~

6.2.34 Location registration

[FFS]

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 029

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here
↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☒ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☐

UTRAN / Radio ☒

Core Network ☐

Source: MCC task 161

Date: 22 Aug 00

Subject: Add new PDCP test cases

Work item:

Category:

(only one category shall be marked with an X)

- F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

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☐

Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

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Reason for change:

New test cases are added.

Clauses affected:

7.3 PDCP

Other specs affected:

Other 3G core specifications
Other GSM core specifications
MS test specifications
BSS test specifications
O&M specifications

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→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

Other comments:

7.3 PDCP

7.3.1 General

7.3.1.1 General assumptions

If not otherwise mentioned, the same procedures as used in RRC test specification (TS 34.123-1) or in the Generic procedure (TS 34.108) applies to reach Initial conditions for PDCP testing. In this test description, common test sequences for PDCP (subclause 7.3.4.1) are defined and are applied either as preamble or postamble to establish or release a Packet Switched (PS) connection for a test case.

If not explicitly described, the same message contents and settings are applied as described in the RRC test description default settings.

Detailed IP header compression coding mechanism as well as mechanism related error recovery and packet reordering described in IETF RFC 2507 are not verified.

For PDCP testing TCP/IP data type and UDP/IP data type as Non-TCP/IP data types are applied for IP data.

An UE supporting IP Header compression method RFC 2507 shall be capable to store a header compression context of at least 512 bytes (Integer).

It shall be possible to reconfigure PDCP settings while Loop back mode 1. With the applied test method using Loop back mode 1, the UE as Originator and Receiver of PDCP SDUs (concurrent transmission) is tested.

7.3.1.2 Common Test sequences and Default message contents for PDCP

General

The settings and parameter used in the "Common Test sequences for PDCP" are described in the "Default PDCP Message Contents". If not explicitly shown there, the message contents are identical with the default contents for the same message type of layer 3 messages for RRC tests, to establish a packet switched session or connection. The contents of test case specific message parameters are described in the test case (Expected Sequence). If not explicitly shown, default settings and parameter are used as message content for all Common Test sequences.

7.3.1.2.1 Common Test sequences for PDCP

Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1)

Initial Conditions

UE is in Idle mode.

Test procedure

After having received the System Informations, the SS starts to setup a RRC connection. After connection establishment and Radio Bearer Setup, the UE Loop back mode 1 is activated and the UE test loop mode 1 is closed.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION	Connection Setup message PS sessions in AM RLC used in RRC testing matches here
2	→		RRC CONNECTION REQUEST	
3	←		RRC CONNECTION SETUP	
4	→		RRC CONNECTION SETUP COMPLETE	The Radio Bearer configuration is as described in TS 34.108, clause 6.10, RAB No. 23: QoS parameter: Traffic Class: Interactive or Background, max. UL:64 kbps max. DL:64 kbps, Residual BER as described in TS 34.108, clause: 6.10.
5	←		ACTIVATE RB TEST MODE	
6	→		ACTIVATE RB TEST MODE COMPLETE	
7	←		RADIO BEARER SETUP	
8	→		RADIO BEARER SETUP COMPLETE	The SS initiates test loop mode 1 using loop back scheme 1, indicated by the Parameter: "UE test loop mode" 1 (X1=0 and X2=0) The "DCCH dummy transmission" not used: disabled: (Y1=0)
9	←		CLOSE UE TEST LOOP	
10	→		CLOSE UE TEST LOOP COMPLETE	After having received the test mode acknowledgement, the loop back mode 1 is activated.

Specific message contents

The contents of test case specific message parameters are described in the test case (Expected Sequence). Default contents of messages are described in the clause Default PDCP Message Contents.

Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)

Initial Conditions

UE is in Idle mode.

Test procedure

After having received the System Information, the SS starts to setup a RRC connection. After connection establishment and Radio Bearer Setup, the UE Loop back mode 1 is activated and the UE test loop mode 1 is closed.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION	Connection Setup message PS sessions in UM RLC used in RRC testing matches here
2	→		RRC CONNECTION REQUEST	
3	←		RRC CONNECTION SETUP	
4	→		RRC CONNECTION SETUP COMPLETE	The Radio Bearer configuration is as described in TS 34.108, clause 6.10, RAB No. 23: QoS parameter: Traffic Class: Interactive or Background, max. UL:64 kbps max. DL:64 kbps, Residual BER as described in TS 34.108, clause: 6.10.
5	←		ACTIVATE RB TEST MODE	
6	→		ACTIVATE RB TEST MODE COMPLETE	
7	←		RADIO BEARER SETUP	
8	→		RADIO BEARER SETUP COMPLETE	The SS initiates test loop mode 1 using loop back scheme 1, indicated by the Parameter: "UE test loop mode"1 (X1=0 and X2=0) The "DCCH dummy transmission" not used: disabled: (Y1=0)
9	←		CLOSE UE TEST LOOP	
10	→		CLOSE UE TEST LOOP COMPLETE	After having received the test mode acknowledgement, the loop back mode 1 is activated.

Specific message contents

The contents of test case specific message parameters are described in the test case (Expected Sequence) Default contents of messages are described in the clause Default PDCP Message Contents.

Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)

Initial Conditions

UE is in connected mode, a UE test loop back mode session for PDCP is established, and the loop mode 1 is "closed".

Test procedure

The UE opens the loop back mode 1, deactivates the test mode and the PS session, releases the Radio Bearer and enters Idle mode.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		OPEN UE TEST LOOP	The SS terminates the test loop mode 1 using loop back scheme 1, (see described parameter) After having received the test mode acknowledgement, the loop back mode 1 is deactivated.
2	→		OPEN UE TEST LOOP COMPLETE	
3	←		DEACTIVATE RB TEST MODE	SS stops the test loop mode 1 UE shall confirm the former message. Afterwards, the UE returns to normal operation
4	→		DEACTIVATE RB TEST MODE COMPLETE	
5	←		RRC CONNECTION RELEASE	SS terminates the connection UE confirms the connection release and returns to Idle mode
6	→		RRC CONNECTION RELEASE COMPLETE	

Specific message contents

The contents of test case specific message parameters are described in the test case (Expected Sequence). Default contents of messages are described in the clause Default PDCP Message Contents.

7.3.1.2.2 Default PDCP Message Contents

This clause contains the default values of RRC messages used for PDCP testing, other than those specified in TS 34.108 clauses 6 and 9, and default values of PDCP messages. Unless indicated otherwise in specific test cases, only PDCP related specific message contents are described here which shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test. If not explicitly described, the message contents are identical with the default contents for the same message type of layer 3 messages for RRC tests, to establish a packet switched session or connection.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of CONNECTION SETUP message:

<u>Capability update requirement</u> _____ - UE radio access capability update requirement _____ - System specific capability update requirement <u>list</u> _____ - System specific capability update requirement	TRUE <u>UE only supports 1 system</u> GSM

Contents of CONNECTION SETUP COMPLETE message:

<u>UE radio access capability</u> - <u>Conformance test compliance</u> - <u>PDCP Capability</u> - <u>Max PDCP SN</u> - <u>Support of lossless SRNS relocation</u> - <u>Supported algorithm types</u> - <u>RFC2507</u> - <u>Maximum MAX_HEADER</u> - <u>Maximum TCP_SPACE</u> - <u>Maximum NON_TCP_SPACE</u> - <u>RLC Capability</u> - <u>Transport channel capability</u> - <u>RF Capability</u> - <u>Physical channel capability</u> - <u>UE multi-mode/multi-RAT capability</u> - <u>Security Capability</u> - <u>LCS Capability</u> - <u>Measurement capability</u>	<u>Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings</u>
<u>UE system specific capability</u>	<u>Value will be check. UE must include the classmark information for the supported system</u>

Contents of ACTIVATE RB TEST MODE message:

<u>Protocol Discriminator</u>	<u>TS 24.007, 11.2.3.1.1</u>
<u>Skip indicator</u>	<u>TS 24.007, 11.2.3.1.2</u>
<u>Message type</u>	01000100B

Contents of ACTIVATE RB TEST MODE COMPLETE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000101B

Contents of DEACTIVATE RB TEST MODE message:

<u>Protocol Discriminator</u>	<u>TS 24.007, 11.2.3.1.1</u>
<u>Skip indicator</u>	<u>TS 24.007, 11.2.3.1.2</u>
Message type	01000110B

Contents of DEACTIVATE RB TEST MODE COMPLETE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000111B

Contents of CLOSE UE TEST LOOP message:

<u>Protocol Discriminator</u> <u>Skip indicator</u> <u>Message type</u> <u>UE test loop mode</u> <u>UE test loop mode 1 LB setup</u> <u>- Length of UE loop mode 1 LB setup IE</u> <u>- LB setup list</u> <u>- LB setup RAB subflow #1</u> <u>- P1 (uplink PDCP header compression shall be performed)</u> <u>- P2 (downlink PDCP header compression shall be performed)</u> <u>- Z13...Z0 (Uplink RLC SDU size in bits)</u>	<u>TS 24.007, 11.2.3.1.1</u> <u>TS 24.007, 11.2.3.1.2</u> <u>01000000B</u> <u>000000100B (X2=0 and X1=0 for UE test mode 1, Y1=0 DCCH dummy transmission disabled)</u> <u>4 octets</u> <u>0 = PDCP header compression enabled</u> <u>0 = PDCP header compression enabled</u> <u>0...16383 (binary coded, Z13 most significant bit); value as negotiated</u>

Contents of CLOSE UE TEST LOOP COMPLETE message:

<u>Protocol Discriminator</u> <u>Skip indicator</u> <u>Message type</u>	<u>TS 24.007, 11.2.3.1.1</u> <u>TS 24.007, 11.2.3.1.2</u> <u>01000001B</u>

Contents of OPEN UE TEST LOOP message:

<u>IE Identifier (only in AM)</u> <u>Protocol Discriminator</u> <u>Skip indicator</u> <u>Message type</u>	<u>1000xxxx</u> <u>TS 24.007, 11.2.3.1.1</u> <u>TS 24.007, 11.2.3.1.2</u> <u>01000010B</u>

Contents of OPEN UE TEST LOOP COMPLETE message:

<u>Protocol Discriminator</u> <u>Skip indicator</u> <u>Message type</u>	<u>TS 24.007, 11.2.3.1.1</u> <u>TS 24.007, 11.2.3.1.2</u> <u>01000011B</u>

7.3.17.3.2 IP Header Compression and PID assignment

7.3.17.3.2.1 UE in RLC AM

7.3.17.3.2.1.1 Transmission of uncompressed Header

7.3.17.3.2.1.1.1 Definition and applicability

Applicable for all UEs supporting RLC AM and a Radio Bearer as described in the Common Test Sequences. The UE shall be capable to deal with a TCP/IP and UDP/IP data packets with uncompressed IP header.

7.3.17.3.2.1.1.2 Conformance requirement

Packet Data Convergence Protocol shall perform the following functions:

- ...

- transfer of user data. Transmission of user data means that PDCP receives PDCP SDU from the NAS and forwards it to the RLC layer and vice versa;

PDCP shall be able (...) to handle them with a correct header compression algorithm and furthermore to indicate the type of the packet within a certain algorithm.

PID value 0 is reserved permanently for no compression

Reference(s)

TS 25.323 clause 5

TS 25.323 subclause 5.1.1

7.3.17.3.2.1.1.3 Test purpose

The test case consists of two test procedures:

The first test procedure verifies, that the "PDCP Data" PDU is used for uncompressed IP header packets, if no IP header compression is negotiated by RRC. The second test procedure verifies, that the "PDCP No header" PDU is used for uncompressed IP header packets, if no IP header compression is negotiated by RRC.

1. To verify, that the UE transmits and receives in unacknowledged mode (RLC AM) TCP/IP and UDP/IP data packets without IP header compression as negotiated by RRC.
2. To verify, that PID assignment rules are correctly applied, if usage of "PDCP Data" PDU are negotiated, i.e. the UE shall recognize PID value = 0 for a received TCP/IP and UDP/IP data packet and it shall use PID=0 to transmit IP data packets, if no IP header compression is negotiated. If usage of "PDCP No Header" PDU is negotiated, no PID assignment is used for transmitting and receiving TCP/IP and UDP/IP data packets.

7.3.17.3.2.1.1.4 Method of test

Initial conditions

UE is in Idle mode

Related ICS/IXIT Statement(s)

1. Test procedure: Transmission of uncompressed IP header packets using PDCP Data PDU

- a) The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC AM using Common test procedures for mobile originated PS switched sessions. Usage of "PDCP Data" PDU has been negotiated by RRC.
- b) The SS sends a TCP/IP data packet with uncompressed IP Header.
- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PDCP PDU type and shall handle the received data packet with the appropriate decoding method. Then it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration using PDCP Data PDU.
- d) The SS receives and decodes the TCP/IP data packet. The decoded data packet shall be identical with the data as sent before.
- e) Step b) to d) shall be repeated by sending a UDP/IP data packet with uncompressed IP Header.

The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1)				
1	←	PDCP Data	The SS creates a TCP/IP packet without IP header compression (PDCP Data PDU). The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: <u>PDU type = 000 (PDCP Data PDU)</u> <u>PID = 0 (uncompressed IP header)</u> data: below described TCP/IP packet ~~After having received the PDCP Data PDU, the UE decodes the PDU and recognizes that there was no PID applied for the TCP/IP packet. Therefore, no IP header decompression shall be applied for this packet. Then, the data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB-LB) entity.~~ <u>After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet)</u> <u>Therefore, no IP header decompression is applied for this packet.</u> <u>The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity.</u> The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function for the received data	
3	←	PDCP Data	The SS creates a UDP/IP packet without IP header compression (PDCP Data PDU). The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: <u>PDU type = 000 (PDCP Data PDU)</u> <u>PID = 0 (uncompressed IP header)</u> data: below described UDP/IP packet	

Step	Direction		Message	Comments
	UE	SS		
4	→		PDCCP Data	After having received the PDCCP Data PDU, the UE decodes the PDU and recognizes that there was no PID applied for the UDP/IP packet. Therefore, no IP header compression shall be applied for this packet. Then, the data packet is forwarded via PDCCP-SAP to the Radio Bearer Loop Back (RB LB) entity. After having received the PDCCP Data PDU, the UE decodes the PDU and recognizes with PID value = 0, there was no IP header compression applied for the UDP/IP packet. Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCCP entity. The UE sends a PDCCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: data: former received ~~TCUD~~P/IP packet After reception of this UDP/IP data packet, the SS decodes the received data
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) which fits to the below described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	~~No. # 21 (16 Bit)~~ No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for AM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in ~~TS 24.108~~ TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	5
- RB information to setup	False
- RB identity	(IE "Support of lossless SRNS relocation" only present, if RLC "In-sequence delivery" is TRUE and in AM)
- PDCP info	present
- Support of lossless SRNS relocation	(AM RLC)
- PDCP PDU header	
- RLC info	
- Downlink RLC mode	

Content of PDCP Data PDU (Step 12)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 34)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

2. Test procedure: Transmission of uncompressed IP header packets using No Header PDU

- The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC AM using Common test procedures for mobile originated PS switched sessions. Usage of "PDCP No Header" PDU has been negotiated by RRC.
- The SS sends a TCP/IP data packet with uncompressed IP Header.
- After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PDCP PDU type and shall handle the received data packet with the appropriate decoding method. Then it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration using PDCP No Header PDU.
- The SS receives and decodes the TCP/IP data packet. The decoded data packet shall be identical with the data as sent before.
- Step b) to d) shall be repeated by sending a UDP/IP data packet with uncompressed IP Header.

- f) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1)				
1	←	PDCP No Header	The SS creates a TCP/IP packet without IP header compression (PDCP No Header PDU). The SS sends a PDCP No Header PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: data: below described TCP/IP packet After having received the PDCP No Header PDU, the UE decodes the PDU and recognizes, there was no PID applied for the TCP/IP packet. Therefore, no IP header decompression shall be applied for this packet. Then, the data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP No Header	The UE sends a PDCP No Header PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function for the received data	
3	←	PDCP No Header	The SS creates a UDP/IP packet without IP header compression (PDCP No Header PDU). The SS sends a PDCP No Header PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: data: below described UDP/IP packet After having received the PDCP No Header PDU, the UE decodes the PDU and recognizes, there was no PID applied for the UDP/IP packet. Therefore, no IP header decompression shall be applied for this packet. Then, the data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
4	→	PDCP No Header	The UE sends a PDCP No Header PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: data: former received TCP/IP packet After reception of this UDP/IP data packet, the SS decodes the received data	
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) which fits to the below described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	No. # 21 (16 Bit) No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for AM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in TS 24.108TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	5
- RB information to setup - RB identity - PDCP info - Support of lossless SRNS relocation	False (IE "Support of lossless SRNS relocation" only present, if RLC "In-sequence delivery" is TRUE and in AM) absent
- PDCP PDU header	(AM RLC)
- RLC info - Downlink RLC mode	

Content of PDCP No Header PDU (Step 12)

Information Element	Value/remark
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP No Header PDU (Step 34)

Information Element	Value/remark
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

~~7.3.17.3.2~~.1.1.5 Test requirements

1. Test requirements: Transmission of uncompressed IP header packets using PDCP Data PDU

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the former packets have been received and handled correctly (PDCP Data PDU). This verifies, that the PDCP configuration on UE side works as negotiated by the RRC.

2. Test requirements: Transmission of uncompressed IP header packets using PDCP No Header PDU

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the former packets have been received and handled correctly (PDCP No Header PDU). This verifies, that the PDCP configuration on UE side works as negotiated by the RRC.

~~7.3.17.3.2~~.1.2 Transmission of compressed Header

~~7.3.17.3.2~~.1.2.1 Definition and applicability

Applicable for all UEs supporting RLC AM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP and UDP/IP data packets and furthermore to establish a PDCP entity which applies IP header compression method RFC 2507.

~~7.3.17.3.2~~.1.2.2 Conformance requirement

Packet Data Convergence Protocol shall perform the following functions:

~~...~~

~~...~~ transfer of user data. Transmission of user data means that PDCP receives PDCP SDU from the NAS and forwards it to the RLC layer and vice versa;

PDCP shall be able (...) to handle them with a correct header compression algorithm and furthermore to indicate the type of the packet within a certain algorithm.

Reference(s)

TS 25.323 clause 5

TS 25.323 subclause 5.1.1

~~7.3.17.3.2~~.1.2.3 Test purpose

1. To verify, that the UE transmits and receives in unacknowledged mode (RLC AM) TCP/IP and UDP/IP data packets by using IP header compression method as described in RFC2507 as negotiated by RRC.
2. To verify, that the PID assignment rules are correctly applied by the UE. The UE as shall use the correct PID value for the applied optimisation method for transmitting and receiving TCP/IP and UDP/IP data packets.

~~7.3.17.3.2~~.1.2.4 Method of test

Initial conditions

UE is in Idle mode

Related ICS/IXIT Statement(s)

Support of IP header compression method RFC 2507 - YES/NO

Test procedure

- a) The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC AM using Common test procedures for mobile originated PS switched sessions. Usage of "PDCP Data" PDU has been negotiated by RRC.

- b) The SS sends a "normal" TCP/IP data packet (no compression packet type), PID=0.

NOTE: According to the compression algorithm RFC 2507, this is necessary for the decompression unit to create the internal CONTEXT with assigned CID.

- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- d) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- e) The SS sends a TCP/IP data packet with packet type: Full_Header, PID=1.

NOTE: According to the compression algorithm RFC 2507, this is necessary to transmit the created CONTEXT and the assigned CID.

- f) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- g) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- h) The SS sends a TCP/IP data packet with packet type: Compressed_TCP, PID=2.
- i) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- j) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- k) The SS sends a TCP/IP data packet with packet type: Compressed_TCP_nondelta, PID=3.
- l) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- m) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- n) Step b) to d) is repeated for a "normal" UDP/IP data packet, PID=0.
- o) Step e) to g) is repeated for a UDP/IP data packet with packet type: Full_Header, PID=1.
- p) The SS sends a UDP/IP data packet with packet type: Compressed_non_TCP, PID=4.
- q) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- r) The SS receives and decodes the UDP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- s) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1)				
1	←	PDCP Data	The SS creates a TCP/IP packet without IP header compression. The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on the TCP/IP header format used by the UE) data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.	
3	←	PDCP Data	The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 1 applied for this TCP/IP data packet and decompresses it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
4	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on which TCP/IP header format is used by the UE) data: former received TCP/IP packet	

Step	Direction		Message	Comments
	UE	SS		
				After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.
5	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 2 (Compressed_TCP packet type) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 2 applied for this TCP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
6	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on which TCP/IP header format is used by the UE) data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.
7	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 3 (Compressed_TCP_nondelta packet type) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 3 applied for this TCP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
8	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on which TCP/IP header format is used by the UE) data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.
				The SS creates a UDP/IP packet without compressed IP header compression.

Step	Direction		Message	Comments
	UE	SS		
9	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes with PID value = 0, there was no IP header compression applied for the UDP/IP packet. Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
10	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: below described UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
11	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU ~~and recognizes with PID value = 1, and recognizes PID value = 1 applied for this UDP/IP data packet and decompress it with the appropriate method. there was no IP header compression applied for the UDP/IP packet.~~ Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
12	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: below described UDP/IP packet

Step	Direction		Message	Comments
	UE	SS		
				After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
13	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 4 (Compressed _non-TCP packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU <u>and recognizes PID value = 4 applied for this UDP/IP data packet and decompress it with the appropriate method, and recognizes with PID value = 4, there was no IP header compression applied for the UDP/IP packet.</u> Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
14	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: below described UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] ([PS connection for AM](#)) ([e.g. Packet to CELL_DCH from CELL_DCH in PS](#)) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup	
- RAB info	
- RAB identity	No. # 21 (16 Bit) No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for AM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in TS 24.108 TS 34.108 , clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	
- RB information to setup	
- RB identity	5
- PDCP info	
- Support of lossless SRNS relocation	False (IE "Support of lossless SRNS relocation" only present, if RLC "In-sequence delivery" is TRUE and in AM)
- PDCP PDU header	present
- Header compression information	1
CHOICE <i>algorithm type</i>	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering expected (Default)
- RLC info	
- Downlink RLC mode	(AM RLC)

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 3)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 5)

Information Element	Value/remark
PDU type	000
PID	00010 (Compressed_TCP, PID = 2)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 7)

Information Element	Value/remark
PDU type	000
PID	00011 (Compressed_TCP_non-delta, PID = 3)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 9)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 11)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 13)

Information Element	Value/remark
PDU type	000
PID	00100 (Compressed_non-TCP, PID = 4)
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

7.3.17.3.2.1.2.5 Test requirements

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the former packets have been received and handled with the correct compression method. This verifies, that the PDCP configuration on UE side works as negotiated by the RRC.

7.3.17.3.2.2 UE in RLC UM

7.3.17.3.2.2.1 Transmission of uncompressed Header

7.3.17.3.2.2.1.1 Definition and applicability

Applicable for all UEs supporting RLC UM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with a TCP/IP and UDP/IP data packets with uncompressed IP header.

~~7.3.17.3.2~~.2.1.2 Conformance requirement

Packet Data Convergence Protocol shall perform the following functions:

~~- ...~~

- transfer of user data. Transmission of user data means that PDCP receives PDCP SDU from the NAS and forwards it to the RLC layer and vice versa;

PDCP shall be able (...) to handle them with a correct header compression algorithm and furthermore to indicate the type of the packet within a certain algorithm.

PID value 0 is reserved permanently for no compression

Reference(s)

TS 25.323 clause 5

TS 25.323 subclause 5.1.1

~~7.3.17.3.2~~.2.1.3 Test purpose

The test case consists of two test procedures:

The first test procedure verifies, that the "PDCP Data" PDU is used for uncompressed IP header packets, if no IP header compression is negotiated by RRC. The second test procedure verifies, that the "PDCP No header" PDU is used for uncompressed IP header packets, if no IP header compression is negotiated by RRC.

1. To verify, that the UE transmits and receives in unacknowledged mode (RLC UM) TCP/IP and UDP/IP data packets without IP header compression as negotiated by RRC.
2. To verify, that PID assignment rules are correctly applied, if usage of "PDCP Data" PDU are negotiated, i.e. the UE shall recognize PID value = 0 for a received TCP/IP and UDP/IP data packet and it shall use PID=0 to transmit IP data packets, if no IP header compression is negotiated. If usage of "PDCP No Header" PDU is negotiated, no PID assignment is used for transmitting and receiving TCP/IP and UDP/IP data packets.

~~7.3.17.3.2~~.2.1.4 Method of test

Initial conditions

UE is in Idle mode

Related ICS/IXIT Statement(s)

1. Test procedure: Transmission of uncompressed IP header packets using PDCP Data PDU

- a) The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC UM using Common test procedures for mobile originated PS switched sessions. Usage of "PDCP Data" PDU has been negotiated by RRC.
- b) The SS sends a TCP/IP data packet with uncompressed IP Header.
- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PDCP PDU type and shall handle the received data packet with the appropriate decoding method. Then it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration using PDCP Data PDU.
- d) The SS receives and decodes the TCP/IP data packet. The decoded data packet shall be identical with the data as sent before.
- e) Step b) to d) shall be repeated by sending a UDP/IP data packet with uncompressed IP Header.

The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)				
1	←	PDCP Data	The SS creates a TCP/IP packet without IP header compression (PDCP Data PDU). The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: <u>PDU type = 000 (PDCP Data PDU)</u> <u>PID = 0 (uncompressed IP header)</u> data: below described TCP/IP packet ~~After having received the PDCP Data PDU, the UE decodes the PDU and recognizes, there was no PID applied for the TCP/IP packet. Therefore, no IP header decompression shall be applied for this packet. Then, the data packet is forwarded via PDCP-SAP to the Radio Bearer Loop-Back (RB-LB) entity.~~ <u>After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet)</u> <u>Therefore, no IP header decompression is applied for this packet.</u> <u>The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB-LB) entity.</u> The RB-LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function for the received data	
3	←	PDCP Data	The SS creates a UDP/IP packet without IP header compression (PDCP Data PDU). The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: <u>PDU type = 000 (PDCP Data PDU)</u> <u>PID = 0 (uncompressed IP header)</u> data: below described UDP/IP packet	

Step	Direction		Message	Comments
	UE	SS		
4	→		PDCCP Data	After having received the PDCCP Data PDU, the UE decodes the PDU and recognizes, there was no PID applied for the UDP/IP packet. Therefore, no IP header decompression shall be applied for this packet. Then, the data packet is forwarded via PDCCP-SAP to the Radio Bearer Loop-Back (RB-LB) entity. After having received the PDCCP Data PDU, the UE decodes the PDU and recognizes with PID value = 0, there was no IP header compression applied for the UDP/IP packet. Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCCP-SAP to the Radio Bearer Loop Back (RB-LB) entity. The RB-LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCCP entity. The UE sends a PDCCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: data: former received TCP/IP packet After reception of this UDP/IP data packet, the SS decodes the received data
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fits to the below described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity - CN domain identity - RB information to setup - RB identity - PDCP info - Support of lossless SRNS relocation - PDCP PDU header - RLC info - Downlink RLC mode	~~No. # 21 (16 Bit)~~ ~~No. # 23~~ as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for UM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in ~~TS 24.108~~ TS 34.108 , clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain 5 False (IE "Support of lossless SRNS relocation" only present, if RLC "In-sequence delivery" is TRUE and in UM) present (UM RLC)

Content of PDCP Data PDU (Step 12)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 34)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

2. Test procedure: Transmission of uncompressed IP header packets using No Header PDU

- The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC UM using Common test procedures for mobile originated PS switched sessions. Usage of "PDCP No Header" PDU has been negotiated by RRC.
- The SS sends a TCP/IP data packet with uncompressed IP Header.
- After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PDCP PDU type and shall handle the received data packet with the appropriate decoding method. Then it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration using PDCP No Header PDU.
- The SS receives and decodes the TCP/IP data packet. The decoded data packet shall be identical with the data as sent before.
- Step b) to d) shall be repeated by sending a UDP/IP data packet with uncompressed IP Header.

- f) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)				
1	←	PDCP No Header	The SS creates a TCP/IP packet without IP header compression (PDCP No Header PDU). The SS sends a PDCP No Header PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: data: below described TCP/IP packet After having received the PDCP No Header PDU, the UE decodes the PDU and recognizes, there was no PID applied for the TCP/IP packet. Therefore, no IP header decompression shall be applied for this packet. Then, the data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP No Header	The UE sends a PDCP No Header PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function for the received data	
3	←	PDCP No Header	The SS creates a UDP/IP packet without IP header compression (PDCP No Header PDU). The SS sends a PDCP No Header PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: data: below described UDP/IP packet After having received the PDCP No Header PDU, the UE decodes the PDU and recognizes, there was no PID applied for the UDP/IP packet. Therefore, no IP header decompression shall be applied for this packet. Then, the data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
4	→	PDCP No Header	The UE sends a PDCP No Header PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: data: former received ~~TCP~~UDP/IP packet After reception of this UDP/IP data packet, the SS decodes the received data	
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fits to the below described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	No. # 21 (16 Bit) No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for UM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in TS 24.108TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	
- RB information to setup	
- RB identity	5
- PDCP info	
- Support of lossless SRNS relocation	False (IE "Support of lossless SRNS relocation" only present, if RLC "In-sequence delivery" is TRUE and in UM)
- PDCP PDU header	absent
- RLC info	
- Downlink RLC mode	(UM RLC)

Content of PDCP No Header PDU (Step 12)

Information Element	Value/remark
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP No Header PDU (Step 34)

Information Element	Value/remark
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

~~7.3.17.3.2~~.2.1.5 Test requirements

1. Test requirements: Transmission of uncompressed IP header packets using PDCP Data PDU

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the former packets have been received and handled correctly (PDCP Data PDU). This verifies, that the PDCP configuration on UE side works as negotiated by the RRC.

2. Test requirements: Transmission of uncompressed IP header packets using PDCP No Header PDU

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the former packets have been received and handled correctly (PDCP No Header PDU). This verifies, that the PDCP configuration on UE side works as negotiated by the RRC.

~~7.3.17.3.2~~.2.2 Transmission of compressed Header

~~7.3.17.3.2~~.2.2.1 Definition and applicability

Applicable for all UEs supporting RLC UM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP and UDP/IP data packets and furthermore to establish a PDCP entity which applies IP header compression method RFC 2507.

~~7.3.17.3.2~~.2.2.2 Conformance requirement

Packet Data Convergence Protocol shall perform the following functions:

~~...~~

~~...~~ transfer of user data. Transmission of user data means that PDCP receives PDCP SDU from the NAS and forwards it to the RLC layer and vice versa;

PDCP shall be able (...) to handle them with a correct header compression algorithm and furthermore to indicate the type of the packet within a certain algorithm.

Reference(s)

TS 25.323 clause 5

TS 25.323 subclause 5.1.1

~~7.3.17.3.2~~.2.2.3 Test purpose

1. To verify, that the UE transmits and receives in unacknowledged mode (RLC UM) TCP/IP and UDP/IP data packets by using IP header compression method as described in RFC2507 as negotiated by RRC.
2. To verify, that the PID assignment rules are correctly applied by the UE. The UE as shall use the correct PID value for the applied optimisation method for transmitting and receiving TCP/IP and UDP/IP data packets.

~~7.3.17.3.2~~.2.2.4 Method of test

Initial conditions

UE is in Idle mode

Related ICS/IXIT Statement(s)

Support of IP header compression method RFC 2507 - YES/NO

Test procedure

- a) The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC UM using Common test procedures for mobile originated PS switched sessions. Usage of "PDCP Data" PDU has been negotiated by RRC.

- b) The SS sends a "normal" TCP/IP data packet (no compression packet type), PID=0.

NOTE: According to the compression algorithm RFC 2507, this is necessary for the decompression unit to create the internal CONTEXT with assigned CID.

- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- d) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- e) The SS sends a TCP/IP data packet with packet type: Full_Header, PID=1.

NOTE: According to the compression algorithm RFC 2507, this is necessary to transmit the created CONTEXT and the assigned CID.

- f) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- g) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- h) The SS sends a TCP/IP data packet with packet type: Compressed_TCP, PID=2.
- i) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- j) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- k) The SS sends a TCP/IP data packet with packet type: Compressed_TCP_nondelta, PID=3.
- l) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- m) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- n) Step b) to d) is repeated for a "normal" UDP/IP data packet, PID=0.
- o) Step e) to g) is repeated for a UDP/IP data packet with packet type: Full_Header, PID=1.
- p) The SS sends a UDP/IP data packet with packet type: Compressed_non_TCP, PID=4.
- q) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decompression method. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- r) The SS receives and decodes the UDP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- s) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)				
1	←	PDCP Data	The SS creates a TCP/IP packet without IP header compression. The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on the TCP/IP header format used by the UE) data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.	
3	←	PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 1 applied for this TCP/IP data packet and decompresses it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
4	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on which TCP/IP header format is used by the UE) data: former received TCP/IP packet	

Step	Direction		Message	Comments
	UE	SS		
				After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.
5	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 2 (Compressed_TCP packet type) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 2 applied for this TCP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
6	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on which TCP/IP header format is used by the UE) Data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.
7	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 3 (Compressed_TCP_nondelta packet type) Data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 3 applied for this TCP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
8	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on which TCP/IP header format is used by the UE) data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function dependent the assigned PID.

Step	Direction		Message	Comments
	UE	SS		
9	←		PDCP Data	The SS creates a UDP/IP packet without compressed IP header compression. The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) Data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes with PID value = 0, there was no IP header compression applied for the UDP/IP packet. Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
10	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: below described UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
11	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU <u>and recognizes PID value = 1 applied for this UDP/IP data packet and decompress it with the appropriate method, and recognizes with PID value = 1, there was no IP header compression applied for the UDP/IP packet.</u> ~~Therefore, no IP header decompression is applied for this packet.~~ The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.

Step	Direction		Message	Comments
	UE	SS		
12		→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: below described UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
13		←	PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 4 (Compressed _non-TCP packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU <u>and recognizes PID value = 1 applied for this UDP/IP data packet and decompress it with the appropriate method, and recognizes with PID value = 4, there was no IP header compression applied for the UDP/IP packet. Therefore, no IP header decompression is applied for this packet.</u> The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
14		→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: below described UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) (e.g. Packet to CELL_DCH from CELL_DCH in PS) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup	
- RAB info	
- RAB identity	No. # 21 (16 Bit) No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs.
	QoS parameter:
	Traffic Class: Interactive or Background,
	max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for UM RLC
	max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters,
	Residual BER as described in TS 24.108 TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2)
	PS domain
- CN domain identity	
- RB information to setup	
- RB identity	5
- PDCP info	
- Support of lossless SRNS relocation	False
	(IE" Support of lossless SRNS relocation " only present, if RLC "In-sequence delivery" is TRUE and in UM)
- PDCP PDU header	present
- Header compression information	1
CHOICE <i>algorithm type</i>	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering expected (Default)
- RLC info	
- Downlink RLC mode	(UM RLC)

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 3)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 5)

Information Element	Value/remark
PDU type	000
PID	00010 (Compressed_TCP, PID = 2)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 7)

Information Element	Value/remark
PDU type	000
PID	00011 (Compressed_TCP_non-delta, PID = 3)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 9)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 11)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 13)

Information Element	Value/remark
PDU type	000
PID	00100 (Compressed_non-TCP, PID = 4)
Data	PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

~~7.3.17.3.2.2.2.5~~ Test requirements

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the former packets have been received and handled with the correct compression method. This verifies, that the PDCP configuration on UE side works as negotiated by the RRC.

~~7.3.17.3.2.2.3~~ Extension of used compression methods

~~7.3.17.3.2.2.3.1~~ Definition and applicability

Applicable for all UEs supporting RLC UM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP data packets and furthermore to establish a PDCP entity which applies IP header compression method: RFC 2507.

~~7.3.17.3.2~~.2.3.2 Conformance requirement

Packet Data Convergence Protocol shall perform the following functions:

~~- ...~~

- transfer of user data. Transmission of user data means that PDCP receives PDCP SDU from the NAS and forwards it to the RLC layer and vice versa;

PDCP shall be able (...) to handle them with a correct header compression algorithm and furthermore to indicate the type of the packet within a certain algorithm.

The PDCP layer shall be able to support several header compression algorithms and it shall always be possible to extend the list of supported algorithms in the future.

The table (PID value allocation table) is reconfigured every time the PDCP entity is reconfigured.

The assignment of the PID values follow the general rules listed below:

- PID values are reassigned for the PDCP entity after renegotiation of the header compression algorithms;
- the list of negotiated (or re-negotiated) header compression entities shall be examined, starting from the first one in the list. The number of PID values to be assigned is specified in the subclause for this algorithm;

Reference(s)

TS 25.323 clause 5

TS 25.323 subclause 5.1.1

TS 25.323 subclause 5.1

~~7.3.17.3.2~~.2.3.3 Test purpose

1. To verify, that the UE is able to handle an extended PID value allocation table after PDCP reconfiguration as configured by RRC.

~~7.3.17.3.2~~.2.3.4 Method of test

Initial conditions

UE is in Idle mode

Related ICS/IXIT Statement(s)

Support of IP header compression method RFC 2507 - YES/NO

Test procedure

- a) The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC UM using Common test procedures for mobile originated PS switched sessions (with test loop back mode 1). Usage of "PDCP Data PDU" and no optimisation method has been negotiated by RRC.
- b) The SS sends a TCP/IP data packet (no compression packet type), PID=0.
- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- d) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- e) The SS reconfigures (using RRC Radio Bearer Reconfiguration message) the PDCP entity by extending the PID value allocation table and therefore the applied optimisation method with the IP header compression method RFC 2507. The test loop back mode 1 in RLC UM is still active.

- f) The SS sends a TCP/IP data packet (no compression packet type), PID=0.
- g) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- h) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- i) The SS sends a TCP/IP data packet with packet type: Full_Header, PID=1.
- j) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- k) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- l) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)				
1	←	PDCP Data	The SS creates a TCP/IP packet without IP header compression. The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression shall be applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.	
3	←	RRC RADIO BEARER RECONFIGURATION	SS extends the "PID value allocation table" with IP header compression PID (RFC 2507) in the UE.	
4	→	RRC RADIO BEARER RECONFIGURATION COMPLETE	UE acknowledges its new settings	
5	←	PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (normal packet type [TCP/IP]) data: below described TCP/IP packet. After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression shall be applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	

Step	Direction		Message	Comments
	UE	SS		
6	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on which TCP/IP header format is used by the UE) data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
7	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 1 applied for this TCP/IP data packet and shall decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
8	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on the TCP/IP header format used by UE) data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC RADIO BEARER RECONFIGURATION message

The contents of the RRC RADIO BEARER RECONFIGURATION message applied in the preamble " Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list	1
RB information to reconfigure	
- PDCP info	
- PDCP PDU header	present
- Header compression information	1
CHOICE <i>algorithm type</i>	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering expected (Default)

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble " Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) with the following exceptions:

Information Element	Value/remark
Capability update requirement	
- UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	~~No. # 21 (16 Bit)~~ No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for UM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in ~~TS 24.108~~ TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	
- RB information to setup	5
- RB identity	
- PDCP info	present
- PDCP PDU header	
- RLC info	
- Downlink RLC mode	(UM RLC)

Content of PDCP Data PDU (Step 1 and 5)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 7)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

~~7.3.17.3.2~~.2.3.5 Test requirements

After PDCP reconfiguration, the UE shall return the TCP/IP data packets as indication, that the extension of used optimisation method are applied by UE. This verifies, that the PDCP configuration on UE side works as negotiated by the RRC.

~~7.3.17.3.2~~.2.4 Compression type used for different entities

~~7.3.17.3.2~~.2.4.1 Definition and applicability

Applicable only for an UE supporting the establishment of more than one PDCP entity in parallel, i.e. it shall be possible to configure more than one Radio Bearer Loop Back entities (each PDCP entity are assigned via PDCP-SAP to its own Radio Bearer Loop Back entity).

Applicable for all UEs supporting RLC UM and a Radio Bearer as described in the Test procedure.

The UE shall be capable to deal with compressed TCP/IP data packets and furthermore it shall apply IP header compression method RFC 2507.

~~7.3.17.3.2~~.2.4.2 Conformance requirement

Packet Data Convergence Protocol shall perform the following functions:

- ...

- transfer of user data. Transmission of user data means that PDCP receives PDCP SDU from the NAS and forwards it to the RLC layer and vice versa;

PDCP shall be able (...) to handle them with a correct header compression algorithm and furthermore to indicate the type of the packet within a certain algorithm.

The assignment of the PID values follow the general rules listed below:

- PID values are assigned independently to each PDCP entity;

Different PDCP entities may include header compression algorithms of the same type

Reference(s)

TS 25.323 clause 5

TS 25.323 subclause 5.1.1

TS 25.323 subclause 5.1

~~7.3.17.3.2~~.2.4.3 Test purpose

NOTE: For this test case, the SS shall be configured to handle more than one received PDCP messages in parallel.

1. To verify, that a configured IP header compression algorithm are applied to compress and decompress TCP/IP data packets by several PDCP entities in parallel, if more than one entities are established, i.e. the UE uses the same PID to transmit two TCP/IP data packets with the same content in parallel using two Radio Bearer configurations.

~~7.3.17.3.2~~.2.4.4 Method of test

Initial conditions

UE is in Idle mode

Related ICS/IXIT Statement(s)

Establishment of more than one PDCP entities - YES/NO

Support of IP header compression method RFC 2507 - YES/NO

Test procedure

- a) The SS setups a packet switched session including two radio bearer configurations in parallel in test loop back mode 1 and in RLC UM using Common test procedures for mobile originated PS switched sessions. Usage of IP header compression method RFC 2507 has been negotiated by RRC.
- b) The SS sends in parallel a "normal" TCP/IP data packet, PID=0 via both PDCP configurations to their peer entities.
- c) After having received the TCP/IP data packets, the PDCP entities of the UE shall recognize the PID value and shall handle the received data packet independent of the used PID with the correct decompression method. Then they forward the data to their Radio Bearer Loop Back entity. Both received data shall be returned by each Radio Bearer Loop Back entity.
- d) The SS receives and decodes TCP/IP data packets according to the inserted PID. The decoded data packets shall be identical with the data as sent before.
- e) After having received the TCP/IP data packets, the PDCP entities of the UE shall recognize the PID value and shall handle the received data packets independent of the used PID with the correct decompression method. Then they forward the data to their Radio Bearer Loop Back entity. Both received data shall be returned by each Radio Bearer Loop Back entity.
- f) The SS receives and decodes TCP/IP data packets according to the inserted PID. The decoded data packets shall be identical with the data as sent before.
- g) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)				
1	←	PDCP Data	The SS sends in parallel a PDCP Data PDU using the RLC-UM-Data-Request Primitive via both PDCP entities with the following contents to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received both PDCP Data PDUs, the UE decodes each PDU and recognizes PID value = 0 (no IP header compression applied for both TCP/IP data packets). Although the same PID is used for both PDUs, the UE shall handle them with the correct method and it forwards both data packets via PDCP-SAPs to their Radio Bearer Loop Back (RB LB) entities. The RB LB entities in loop back mode 1 return the received data packets and send them back to their PDCP entities.	
2	→	PDCP Data	The UE sends back for each PDCP configuration a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on the TCP/IP header format used by UE) data: former received TCP/IP packet After reception of TCP/IP data packets, the SS applies the appropriate decoding function for both received messages depending on which PID was assigned to the received data	
3	←	PDCP Data	The SS sends in parallel a PDCP Data PDU using the RLC-UM-Data-Request Primitive via both PDCP entities with the following contents to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet After having received both PDCP Data PDUs, the UE decodes each PDU and recognizes PID value = 1 (Full_Header packet type applied for both TCP/IP data packets). Although the same PID is used for both PDUs, the UE shall handle them with the correct method and it forwards both data packets via PDCP-SAPs to their Radio Bearer Loop Back (RB LB) entities. The RB LB entities in loop back mode 1 return the received data packets and send them back to their PDCP entities.	

Step	Direction		Message	Comments
	UE	SS		
4	→		PDCP Data	The UE sends back for each PDCP configuration a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on the TCP/IP header format used by UE) data: former received TCP/IP packet After reception of TCP/IP data packets, the SS applies the appropriate decoding function for both received messages depending on which PID was assigned to the received data
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup	
- RAB info	
- RAB identity	~~No. # 21 (16 Bit)~~ No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for UM RLC configuration for UM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in ~~TS 24.108~~ TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	
- RB information to setup	
- RB identity	5
- PDCP info	
- PDCP PDU header	present
- Header compression information	1
CHOICE <i>algorithm type</i>	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering expected (Default)
- RLC info	
- Downlink RLC mode	(UM RLC)
- RB information to setup	(NOTE: for RB ID 6, the same RAB configurations are used (~~No. # 21 (16 Bit)~~ No. # 23 as described in TS 34.108) as described for RB ID 5)
- RB identity	6
- PDCP info	
- PDCP PDU header	present
- Header compression information	1
CHOICE <i>algorithm type</i>	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering expected (Default)
- RLC info	
- Downlink RLC mode	(UM RLC)

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 3)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

~~7.3.17.3.2.2.4.5~~ Test requirements

The UE shall return both TCP/IP data packets as indication that the former received data packets associated with the same PID value are handled in parallel with the same decompression method. This verifies, that more than one PDCP configuration on UE side using the same compression method is able to apply it in parallel.

~~7.3.17.3.2.2.5~~ Reception of not defined PID values

~~7.3.17.3.2.2.5.1~~ Definition and applicability

Applicable for all UEs supporting RLC UM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP data packets and furthermore to establish a PDCP entity, which applies PDCP Data PDU if no IP header compression method, is negotiated.

The UE shall not forward invalid PDCP PDU data contents to its Radio Bearer.

~~7.3.17.3.2.2.5.2~~ Conformance requirement

PDCP shall be able (...) to handle them with a correct header compression algorithm and furthermore to indicate the type of the packet within a certain algorithm;

PID values that are used and are not defined invalidate the PDCP PDU;

Reference(s)

TS 25.323 subclause 5.1.1

TS 25.323 subclause 5.1.2.1

~~7.3.17.3.2.2.5.3~~ Test purpose

1. To verify, that a UE considers a received PDCP PDU message with not defined PID value as invalid, i.e. such an invalid PDCP PDU is not forwarded to the Radio Bearer entity on UE side. Therefore the UE using loop back mode 1 does not return such data packet to the SS.

~~7.3.17.3.2.2.5.4~~ Method of test

Initial conditions

UE is in Idle mode

Related ICS/IXIT Statement(s)

Test procedure

- a) The SS setups a packet switched session including radio bearer and test loop back mode 1 in RLC UM using Common test procedures for mobile originated PS switched sessions. Usage of "PDCP Data PDU" and no PDCP IP header compression method has been negotiated by RRC.
- b) The SS sends a "normal" TCP/IP data packet (no compression packet type), PID=0.
- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decoding method. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- d) The SS receives and decodes TCP/IP data packets according to the inserted PID. The decoded data packets shall be identical with the data as sent before.
- e) The SS sends a TCP/IP data packet with packet type: Full_Header, PID=1.
- f) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet with the correct decoding method. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- g) The SS waits an amount of time to make sure, that no returned data packet was sent by UE.
- h) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)				
1	←	PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression shall be applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.	
3	←	PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet. After having received the PDCP Data PDU, the UE shall recognize, that a not defined PID value (as negotiated by RRC) is inserted in the PDCP PDU. The UE shall consider this PDU as invalid, i.e. the data packet is not forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. Therefore this data packet is not returned to the SS.	
4			The SS waits a amount of time to make sure, that the former data packet is not returned to the SS.	
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble " Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble " Setup a UE originated PS session using IP Header compression in UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	No. # 21 (16 Bit) No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for UM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in TS 24.108TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	
- RB information to setup	
- RB identity	5
- PDCP info	
- PDCP PDU header	present
- RLC info	
- Downlink RLC mode	(UM RLC)

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 3)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

~~7.3.17.3.2.2.5.5~~ Test requirements

The UE shall return the received TCP/IP data packet using the PDCP Data PDU with PID = 0 as indication, that the UE works as configured.

The UE shall not return the TCP/IP data packet using the PDCP Data PDU with PID = 1 as indication, that this PDU was considered as invalid by the UE. This verifies, that the PDCP configuration on UE side has considered this PDU as invalid.

~~7.3.2 — PDCP Multiplexing different RB onto one RLC entity~~

~~FFS~~

~~Not included in Release 1999~~

7.3.3 PDCP sequence numbering when lossless SRNS Relocation

7.3.3.1 Data transmission if lossless SRNS Relocation is supported

7.3.3.1.1 Definition and applicability

Applicable for all UEs supporting RLC AM, RLC in-sequence delivery, a Radio Bearer as described in the Common Test Sequences and lossless SRNS relocation.

The UE shall be capable to deal with uncompressed TCP/IP ~~and UDP/IP~~ data packets and furthermore to establish a PDCP entity which applies PDCP Sequence Numbering

7.3.3.1.2 Conformance requirement

The PDCP layer shall carry out the following functions during lossless SRNS relocation:

- forwarding of PDCP SDUs and associated sequence numbering;

Reference(s)

TS 25.323 subclause 5.4

7.3.3.1.3 Test purpose

1. To verify, that a UE supporting lossless SRNS relocation is able to receive and to send IP data packets by using PDCP Sequence Numbering as negotiated by RRC.

7.3.3.1.4 Method of test

Initial conditions

SS: 2 cells - Cell A belonging to the valid SRNS (Source SRNS), Cell B belonging to the DRNS (Target SRNS). Both cells are neighbour cells. Cell A has a higher RF power level than Cell B such that an UE shall find Cell A more suitable for service.

UE: It is in Idle mode and has selected cell A with valid SRNS (Source SRNS).

Related ICS/IXIT Statement(s)

Support of lossless SRNS Relocation - YES/NO

Support of RLC in-sequence delivery - YES/NO

Test procedure

- a) The SS setups a packet switched session including Radio Bearer and test loop back mode 1 in RLC AM and in-sequence delivery using Common test procedures for mobile originated PS switched sessions in Cell A. Usage of "PDCP Data" PDU, support of lossless SRNS relocation and no IP header compression has been negotiated by RRC. The PDCP SN window size has been negotiated by RRC.
- b) The SS sends a TCP/IP data packet (no compression packet type), PID=0.
- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- d) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- e) The SS starts to broadcast BCCH messages on the primary CPICH in cell B with a power level higher than in cell A. The UE shall chose cell B to be more suitable for service and hence perform a cell reselection.
- f) After completion of cell reselection, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH of cell B with the Cell update cause "Cell Reselection".
- g) After having performed SRNS relocation (target RNC allocated with new S-RNTI for the UE), the Target SRNS is the valid SRNS and the SS sends a "CELL UPDATE CONFIRM" message with new RNC_ID to indicate the completion of the cell update.
- h) The UE shall confirm the reallocation.
- i) The SS sends the next TCP/IP data packet (no compression packet type), PID=0 using the "PDCP Data" PDU to the UE.
- j) After having received the TCP/IP data packet, the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- k) The SS receives and decodes TCP/IP data packets according to the inserted PID. The decoded data packets shall be identical with the data as sent before.
- l) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments	
	UE	SS			
Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1) in Cell A					
1	←	PDCP Data	The SS creates a TCP/IP packet without IP header compression. The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression shall be applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.		
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.		
3	→	RRC CELL UPDATE	The SS increases the RF power level of cell B and decreases the power level of Cell A such that the UE finds cell B more suitable for service.		
4			The UE cell reselection is performed and Cell B are selected for service.		
5			Then, the UE shall inform the SS about the new cell selection by sending cell update with new parameters (parameter values as used in RRC testing).		
6			←	RRC CELL UPDATE CONFIRM	After having performed SRNS relocation, the Target SRNS is the valid SRNS and the SS sends a "CELL UPDATE CONFIRM" message with new parameter "RNC_ID" to indicate the completion of SRNS relocation (parameters as used in RRC testing).
7			→	RNTI REALLOCATION COMPLETE	The UE confirms the newly received information (parameters as used in RRC testing).

Step	Direction		Message	Comments
	UE	SS		
8		←	PDCP Data	The SS sends the next PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression shall be applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.
9		→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup	
- RAB info	
- RAB identity	No. # 21 (16 Bit) No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for AM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in TS 24.108TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain
- CN domain identity	
- RB information to setup	
- RB identity	5
- PDCP info	
- Max PDCP SN	65535
- Support of lossless SRNS relocation	TRUE
- PDCP PDU header	present
- RLC info	
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	True

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP Data PDU (Step 8)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

7.3.3.1.5 Test requirements

After having sent the "RRC RNTI REALLOCATION COMPLETE", the UE shall return the received TCP/IP data packets as indication, that it supports lossless SRNS relocation. This implicitly verifies, that Sequence Numbering is used for lossless SRNS relocation.

7.3.3.2 Synchronisation of PDCP sequence numbers

7.3.3.2.1 Definition and applicability

Applicable for all UEs supporting RLC AM, RLC in-sequence delivery, a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP and UDP/IP data packets and furthermore it shall be capable to use IP Header compression method RFC 2507.

7.3.3.2.2 Conformance requirement

The PDCP SeqNum PDU shall be sent once by the peer PDCP entities when synchronisation of the PDCP SN is required. (...) Synchronisation of PDCP SN is required after (...) RB reconfiguration.

Reference(s)

TS 25.323 subclause 5.4

7.3.3.2.3 Test purpose

1. To verify, that the UE supporting lossless SRNS relocation as negotiated by RRC is able to handle the "PDCP SeqNum" PDU to synchronize the used PDCP Sequence Number after reconfiguration of the Radio Bearer.

7.3.3.2.4 Method of test

Initial conditions

SS: 2 cells - Cell A belonging to the valid SRNS (Source SRNS), Cell B belonging to the DRNS (Target SRNS). Both cells are neighbour cells. Cell A has a higher RF power level than Cell B such that an UE shall find Cell A more suitable for service.

UE: It is in Idle mode and has selected cell A with valid SRNS (Source SRNS).

Related ICS/IXIT Statement(s)

Support of lossless SRNS relocation - YES/NO

Support of RLC in-sequence delivery - YES/NO

Test procedure

- a) The SS setups a packet switched session including Radio Bearer and test loop back mode 1 in RLC AM and in-sequence delivery using Common test procedures for mobile originated PS switched sessions in Cell A. Usage of "PDCP Data" PDU, support of lossless SRNS relocation and no IP header compression has been negotiated by RRC. The PDCP SN window size has been negotiated by RRC.
- b) The SS sends a TCP/IP data packet (no compression packet type), PID=0.
- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- d) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- e) The SS reconfigures (using RRC Radio Bearer Reconfiguration message) the PDCP entity by extending the PID value allocation table and therefore the applied optimisation method with the IP header compression method RFC 2507. The test loop back mode 1 in RLC AM is still active.
- f) The SS sends the next TCP/IP data packet (no compression packet type), PID=0 using the "PDCP SeqNum" PDU including the current PDCP Sequence Number value to the UE.

- g) After having received the TCP/IP data packet, the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- h) The SS receives and decodes TCP/IP data packets according to the inserted PID. The decoded data packets shall be identical with the data as sent before.
- i) The SS deactivates the Loop back test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1) in Cell A				
1	←	PDCP Data	The SS creates a TCP/IP packet without IP header compression. The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression applied for this TCP/IP data packet) Therefore, no IP header decompression shall be applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	
2	→	PDCP Data	The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 data: former received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.	
3	←	RRC RADIO BEARER RECONFIGURATION	SS extends the "PID value allocation table" with IP header compression PID (RFC 2507) in the UE.	
4	→	RRC RADIO BEARER RECONFIGURATION COMPLETE	UE acknowledges its new settings	
5	←	PDCP SeqNum	The SS sends a PDCP SeqNum PDU including its current Sequence Number with the following content to the UE: PDU type = 001 (PDCP SeqNum PDU) PID = 0 (normal packet type [TCP/IP]) SeqNum = current PDCP Sequence Number data: below described TCP/IP packet After having received the PDCP SeqNum PDU, the UE shall set the received PDCP Sequence Number as its own valid value. It decodes the PDU, recognizes PID value = 0 applied for this TCP/IP data packet and shall decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in loop back mode 1 returns the received data packet and sends it back to its PDCP entity.	

Step	Direction		Message	Comments
	UE	SS		
6		→	PDCP PDU	The UE sends a PDCP PDU with PDCP Header back to the SS. The content is as follows: PDU type = 000 (PDCP Data PDU) PID value = 0 to 5, except 4 (depending on the TCP/IP Header format used by UE) SeqNum: current UE value, (optional parameter, depending on the used PDU) data: former received TCP/IP packet. After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
Deactivate a UE originated PS session using IP Header compression (using Loop back test mode 1)				

Specific Message Contents

RRC RADIO BEARER RECONFIGURATION message

The contents of the RRC RADIO BEARER RECONFIGURATION message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list	1
RB information to reconfigure	
- PDCP info	
- Max PDCP SN	65535
- Support of lossless SRNS relocation	TRUE
- PDCP PDU header	present
- Header compression information	1
CHOICE <i>algorithm type</i>	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering expected (Default)

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) with the following exceptions:

Information Element	Value/remark
Capability update requirement	
- UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE originated PS session using IP Header compression in AM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity - CN domain identity - RB information to setup - RB identity - PDCP info - Max PDCP SN - Support of lossless SRNS relocation - PDCP PDU header - RLC info - Downlink RLC mode - In-sequence delivery	~~No. # 21 (16 Bit)~~ No. # 23 as described in TS 34.108, Table 6.10.2.1.1 Prioritised RABs. QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.22 including described physical channel parameters, configuration for AM RLC max. DL: 64 kbps as described in TS 34.108, subclause 6.10.2.4.1.23 including described physical channel parameters, Residual BER as described in TS 24.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108, Table 6.10.2.1.2) PS domain 5 65535 TRUE present (AM RLC) True

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

Content of PDCP SeqNum PDU (Step 5)

Information Element	Value/remark
PDU type PID Sequence number Data	001 00000 (No header compression, PID = 0) (16 Bit value) valid Sequence Number of the SS PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 5 Kbytes.

7.3.3.2.5 Test requirements

After having received the TCP/IP data packet conveyed with the "PDCP SeqNum" PDU, the UE shall return the TCP/IP data packets as indication, that the UE is able to handle a Sequence Number synchronisation.

7.3.4 Common Test sequences and Default message contents for PDCP

General

The settings and parameter used in the "Common Test sequences for PDCP" are described in the "Default PDCP Message Contents". If not explicitly shown there, the message contents are identical with the default contents for the same message type of layer 3 messages for RRC tests, to establish a packet switched session or connection. The contents of test case specific message parameters are described in the test case (Expected Sequence). If not explicitly shown, default settings and parameter are used as message content for all Common Test sequences.

7.3.4.1 Common Test sequences for PDCP

Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1)

Initial Conditions

UE is in Idle mode.

Test procedure

After having received the System Information, it the UE requests a RRC connection. After connection establishment and Radio Bearer Setup, the UE Loop back mode 1 is activated and the UE test loop mode 1 is closed.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION	
2		→	RRC CONNECTION REQUEST	
3		←	RRC CONNECTION SETUP	Connection Setup message PS sessions in AM RLC used in RRC testing matches here
4		→	RRC CONNECTION SETUP COMPLETE	
5		←	ACTIVE RB TEST MODE	
6		→	ACTIVE RB TEST MODE COMPLETE	
7		←	RADIO BEARER SETUP	The Radio Bearer configuration is as described in TS 34.108, clause 6.10, RAB No. 21: QoS parameter: Traffic Class: Interactive or Background, max. UL:64 kbps max. DL:64 kbps, Residual BER as described in TS 24.108, clause: 6.10.
8		→	RADIO BEARER SETUP COMPLETE	
9		←	CLOSE UE TEST LOOP	The SS initiates test loop mode 1 using loop back scheme 1, indicated by the Parameter: "UE test loop mode" = 1 (X1=0 and X2=0) The "DCCH dummy transmission" not used: disabled: (Y1=0)
10		→	CLOSE UE TEST LOOP COMPLETE	After having received the test mode acknowledgement, the loop back mode 1 is activated.

Specific message contents

The contents of test case specific message parameters are described in the test case (Expected Sequence). Default contents of messages are described in the clause 7.3.4.1: Default PDCP Message Contents.

Setup a UE-originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)

Initial Conditions

UE is in Idle mode.

Test procedure

After having received the System Information, the UE requests a RRC connection. After connection establishment and Radio Bearer Setup, the UE Loop back mode 1 is activated and the UE test loop mode 1 is closed.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION	Connection Setup message PS sessions in UM RLC used in RRC testing matches here
2	→		RRC CONNECTION REQUEST	
3	←		RRC CONNECTION SETUP	
4	→		RRC CONNECTION SETUP COMPLETE	The Radio Bearer configuration is as described in TS 34.108, clause 6.10, RAB No. 21: QoS parameter: Traffic Class: Interactive or Background, max. UL:64 kbps max. DL:64 kbps, Residual BER as described in TS 24.108, clause: 6.10.
5	←		ACTIVE RB TEST MODE	
6	→		ACTIVE RB TEST MODE COMPLETE	
7	←		RADIO BEARER SETUP	
8	→		RADIO BEARER SETUP COMPLETE	The SS initiates test loop mode 1 using loop back scheme 1, indicated by the Parameter: "UE test loop mode"1 (X1=0 and X2=0) The "DCCH dummy transmission" not used: disabled: (Y1=0)
9	←		CLOSE UE TEST LOOP	
10	→		CLOSE UE TEST LOOP COMPLETE	After having received the test mode acknowledgement, the loop back mode 1 is activated.

Specific message contents

The contents of test case specific message parameters are described in the test case (Expected Sequence). Default contents of messages are described in the clause 7.3.4.1: Default PDCP Message Contents.

Deactivate a UE-originated PS session using IP Header compression (using Loop back test mode 1)

Initial Conditions

UE is in connected mode, a UE test loop back mode session for PDCP is established, and the loop mode 1 is "closed".

Test procedure

The UE opens the loop back mode 1, deactivates the test mode and the PS session, releases the Radio Bearer and enters Idle mode.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	OPEN UE TEST LOOP	The SS terminates the test loop mode 1 using loop back scheme 1, (see described parameter) After having received the test mode acknowledgement, the loop back mode 1 is deactivated. SS stops the test loop mode 1. UE shall confirm the former message. Afterwards, the UE returns to normal operation SS terminates the connection UE confirms the connection release and returns to Idle mode
2		→	OPEN UE TEST LOOP COMPLETE	
3		←	DEACTIVATE RB TEST MODE	
4		→	DEACTIVATE RB TEST MODE COMPLETE	
5		←	RRC CONNECTION RELEASE	
6		→	RRC CONNECTION RELEASE COMPLETE	

Specific message contents

The contents of test case specific message parameters are described in the test case (Expected Sequence). Default contents of messages are described in the clause Default PDCP Message Contents.

7.3.4.2 Default PDCP Message Contents

This clause contains the default values of RRC messages used for PDCP testing, other than those specified in TS 34.108 clauses 6 and 9, and default values of PDCP messages. Unless indicated otherwise in specific test cases, only PDCP related specific message contents are described here which shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test. If not explicitly described, the message contents are identical with the default contents for the same message type of layer 3 messages for RRC tests, to establish a packet switched session or connection.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: — SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of CONNECTION SETUP message:

Capability update requirement	
—— UE radio access capability update requirement	TRUE
—— System specific capability update requirement list	UE only supports 1 system
—— System specific capability update requirement	GSM

Contents of CONNECTION SETUP COMPLETE message:

UE radio access capability	Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
—— Conformance test compliance	
—— PDCP Capability	
—— Max PDCP SN	
—— Support of lossless SRNS relocation	
—— Supported algorithm types	
—— RFC2507	
—— Maximum MAX_HEADER	
—— Maximum TCP_SPACE	
—— Maximum NON_TCP_SPACE	
—— RLC Capability	
—— Transport channel capability	
—— RF Capability	
—— Physical channel capability	
—— UE multi-mode/multi-RAT capability	
—— Security Capability	
—— LCS Capability	
—— Measurement capability	
UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of ACTIVATE RB TEST MODE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000100B

Contents of ACTIVATE RB TEST MODE COMPLETE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000101B

Contents of DEACTIVATE RB TEST MODE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000110B

Contents of DEACTIVATE RB TEST MODE COMPLETE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000111B

Contents of CLOSE UE TEST LOOP message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000000B
UE test loop mode	000000100B (X2=0 and X1=0 for UE test mode 1, Y1=0 DCCH dummy transmission disabled)
UE test loop mode 1 LB setup	
— Length of UE loop mode 1 LB setup IE	4 octets
— LB setup list	
— LB setup RAB subflow #1	
— P1 (uplink PDCP header compression shall be performed)	0 = PDCP header compression enabled
— P2 (downlink PDCP header compression shall be performed)	0 = PDCP header compression enabled
— Z13...Z0 (Uplink RLC SDU size in bits)	0...16383 (binary coded, Z13 most significant bit); value as negotiated

Contents of CLOSE UE TEST LOOP COMPLETE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000001B

Contents of OPEN UE TEST LOOP message:

IE Identifier (only in AM)	1000xxx
Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000010B

Contents of OPEN UE TEST LOOP COMPLETE message:

Protocol Discriminator	TS 24.007, 11.2.3.1.1
Skip indicator	TS 24.007, 11.2.3.1.2
Message type	01000011B

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 030

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here
↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☒ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☐

UTRAN / Radio ☒

Core Network ☐

Source: MCC task 161

Date: 22 Aug 00

Subject: Add new BMC test cases

Work item:

Category:

(only one category shall be marked with an X)

- F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

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☐

Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

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Reason for change:

New test cases are added.

Clauses affected:

7.4 BMC

Other specs affected:

Other 3G core specifications
Other GSM core specifications
MS test specifications
BSS test specifications
O&M specifications

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→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

Other comments:

7.4 BMC

General

For BMC test description it is assumed, that UE manufacturers define CB data contents (CB-Data 1 and 2) for two different CB message types and describe how the reception is indicated in a clear way on the UE side.

Only Cell Broadcast Services (CBS) as distributed BMC service are applied. For a UE supporting BMC, it is assumed, that there is a BMC entity established, if Initial conditions are reached.

If not otherwise mentioned, the same procedures as used in RRC test specification [TS 34.123-1] applies to reach Initial conditions for BMC testing. The system information methods used to configure the BMC channel are mapped onto one FACH.

It shall be possible to activate and deactivate a certain CB message ID according to (CB data 1 and 2) triggered by the user on the UE side.

7.4.1 General BMC message reception

7.4.1.1 UE in RRC Idle mode

7.4.1.1.1 Definition and applicability

Applicable only for a UE supporting Cell Broadcast Services (CBS) as a type of Broadcast/Multicast Services.

It shall be possible to indicate the reception of certain CBS message contents carried with certain activated CB message types in a clear way on the UE side.

7.4.1.1.2 Conformance requirement

A UE supporting Cell Broadcast Services shall be capable to receive BMC messages in RRC Idle mode.

Reference(s)

TS 25.324 subclause 9.1

7.4.1.1.3 Test purpose

To verify, that a BMC configuration for a UE is able to receive activated CBS messages when in RRC Idle mode.

7.4.1.1.4 Method of test

Initial conditions

UE is in RRC Idle mode; BMC entity is established

SS: 1 cell,

NOTE: The CB message ID stored on the SIM shall be known for this test (parameter for CBS PDU's). The CBS data type shall be allocated and activated in the UE.

Related ICS/IXIT Statement(s)

ICS: CBS message support - YES/No

IXIT: CBS-Data 1: Bitstring of N*8 (where N≥1 and less than 1246)

NOTE: For CB-Data 1 IXIT, the manufacturer shall define CBS data as Bitstring together with the CB message ID used for transmitting this CB data, which is indicated by the UE after reception in a clear way according to the capabilities stored on the SIM. Furthermore, the manufacturer shall describe the indication on the UE side (e.g. certain CBS traffic information)

Test procedure

- a) The UE in RRC Idle mode is triggered to wait for the next system information. The UE is activated to receive expected CBS messages as described by the manufacturer,
- b) The UE and the SS have configured their RLC, MAC and PHYs layers with all CB related system information, broadcasted by SS
- c) The SS sends the CBS message containing an activated CBS message type according to CB-Data 1 to the UE; this shall be repeated for "CPREP" times (indicated by parameter "repetition period" in the schedule information)
- d) The UE indicates in an unambiguous way, that this message was received, by certain clear indications (e.g. a unique part of the CB data contents)

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION	Transmit this message as described below on the BCCH, in addition to the regular BCCH transmissions (see RRC test description). Included are CB related system information parameter of the CBS: - CTCH ID, - FACH ID and associated format set, - S-CCPCH ID, - CBS DRX Level 1 information (optional) - optional: Period of CTCH allocation on S-CCPCH - optional: CBS frame offset
2				The SS waits for about 10 s to make sure, that the UE is configured to receive CBS data
3		←	BMC CBS Message	Activated CBS message with CB Data 1 message content as described by the manufacturer. This message shall be repeated "CPREP" times, Parameter: - Message_ID, - Serial-No, - Data coding scheme, - CB-Data 1,
4				After having received the BMC CBS message the UE shall indicate the reception of CB Data 1 in a clear way.

Specific Message Contents

SYSTEM INFORMATION TYPE 5

The contents of SYSTEM INFORMATION TYPE 5 Information Element in this test case are identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] with the following exceptions:

Information Element	Value/remark
CHOICE mode	(see RRC default test settings)
PRACH system information	(see RRC default test settings)
Secondary CCPCH system	
- Secondary CCPCH information	1
- TFCS	(see RRC default test settings)
- FACH/PCH information	1
- TFS	(see RRC default test settings)
- CTCH indicator	TRUE
- PICH info	(see RRC default test settings)

BMC CBS Message

Information Element	Value/remark
Message Type	1 (CBS message)
Message ID	Bitstring (16) CB message ID, it shall fit to the stored Message ID in the SIM inserted in the UE (source and type) [see TS 23.041] according to the transmitted CB-Data 1 content.
Serial Number	[see TS 23.041]
- Geographic Scope Indicator (2 bit)	11 (Normal Cell wide)
- Message Code (10 bit)	in accordance with the Message ID
- Update Number (4 bit)	for a new message: 0000, incremented by one for each repetition
Data Coding Scheme	Bitstring (16) ID of the alphabet/coding and the applied language [see TS 23.041]
CB Data	Bitstring (N*8), [see IXIT value: CB-Data 1]

7.4.1.1.5 Test requirements

The UE shall store and decode a received activated CBS message.

7.4.1.2 UE in RRC Connected mode, state CELL_PCH

7.4.1.2.1 Definition and applicability

Applicable only for a UE supporting Cell Broadcast Services (CBS) as a type of Broadcast/Multicast Services.

It shall be possible to indicate the reception of certain CBS message contents carried with certain activated CB message types in a clear way on the UE side.

7.4.1.2.2 Conformance requirement

A UE supporting Cell Broadcast Service (CBS) shall be capable to receive BMC messages (...) in CELL_PCH RRC-state of Connected mode.

Reference(s)

TS 25.324 subclause 9.1

7.4.1.2.3 Test purpose

To verify, that a BMC configuration for a UE is able to receive activated CBS messages when in RRC Connected mode, state CELL_PCH.

7.4.1.2.4 Method of test

Initial conditions

UE is in Connected mode state CELL_PCH; BMC entity is established

SS: 1 cell,

NOTE: The CB message ID stored on the SIM shall be known for this test (parameter for CBS PDU's). The CBS data type shall be allocated and activated in the UE.

Related ICS/IXIT Statement(s)

ICS: CBS message support - YES/No

IXIT: CBS-Data 1: Bitstring of $N \times 8$ (where $N \geq 1$ and less than 1246)

NOTE: For CB-Data 1 IXIT, the manufacturer shall define CBS data as Bitstring together with the CB message ID used for transmitting this CB data, which is indicated by the UE after reception in a clear way according to the capabilities stored on the SIM. Furthermore, the manufacturer shall describe the indication on the UE side (e.g. certain CBS traffic information)

Test procedure

- a) The UE in RRC CELL_PCH is triggered to wait for the next system information. The UE is activated to receive expected CBS messages as described by the manufacturer,
- b) The UE and the SS have configured their RLC, MAC and PHYs layers with all CB related system information, broadcasted by SS
- c) The SS sends the CBS message containing an activated CBS message type according to CB-Data 1 to the UE; this shall be repeated for "CPREP" times (indicated by parameter "repetition period" in the schedule information)
- d) The UE indicates in an unambiguous way, that this message was received, by certain clear indications (e.g. a unique part of the CB data contents)

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION	Transmit this message as described below on the BCCH, in addition to the regular BCCH transmissions (see RRC test description). Included are CB related system information parameter of the CBS: - CTCH ID, - FACH ID and associated format set, - S-CCPCH ID, - CBS DRX Level 1 information (optional) - optional: Period of CTCH allocation on S-CCPCH - optional: CBS frame offset
2				The SS waits for about 10 s to make sure, that the UE is configured to receive CBS data
3	←		BMC CBS Message	Activated CBS message with CB Data 1 message content as described by the manufacturer. This message shall be repeated "CPREP" times, Parameter: - Message_ID, - Serial-No, - Data coding scheme, - CB-Data 1,
4				After having received the BMC CBS message the UE shall indicate the reception of CB Data 1 in a clear way.

Specific Message Contents

SYSTEM INFORMATION TYPE 6

The contents of SYSTEM INFORMATION TYPE 6 Information Element in this test case are identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] with the following exceptions:

Information Element	Value/remark
CHOICE mode	(see RRC default test settings)
PRACH system information	(see RRC default test settings)
Secondary CCPCH system	
- Secondary CCPCH information	1
- TFCS	(see RRC default test settings)
- FACH/PCH information	1
- TFS	(see RRC default test settings)
- CTCH indicator	TRUE
- PICH info	(see RRC default test settings)

BMC CBS Message

Information Element	Value/remark
Message Type	1 (CBS message)
Message ID	Bitstring (16) CB message ID, it shall fit to the stored Message ID in the SIM inserted in the UE (source and type) [see TS 23.041] according to the transmitted CB-Data 1 content.
Serial Number	[see TS 23.041]
- Geographic Scope Indicator (2 bit)	11 (Normal Cell wide)
- Message Code (10 bit)	in accordance with the Message ID
- Update Number (4 bit)	for a new message: 0000, incremented by one for each repetition
Data Coding Scheme	Bitstring (16) ID of the alphabet/coding and the applied language [see TS 23.041]
CB Data	Bitstring (N*8), [see Ixit value: CB-Data 1]

7.4.1.2.5 Test requirements

The UE shall store and decode a received activated CBS message.

7.4.1.3 UE in RRC Connected mode, state URA_PCH

7.4.1.3.1 Definition and applicability

Applicable only for a UE supporting Cell Broadcast Services (CBS) as a type of Broadcast/Multicast Services.

It shall be possible to indicate the reception of certain CBS message contents carried with certain activated CB message types in a clear way on the UE side.

7.4.1.3.2 Conformance requirement

A UE supporting Cell Broadcast Service (CBS) shall be capable to receive BMC messages (...) in CELL_URA RRC-state of Connected mode.

Reference(s)

TS 25.324 subclause 9.1

7.4.1.3.3 Test purpose

To verify, that a BMC configuration for a UE is able to receive activated CBS messages when in RRC Connected mode, state CELL_URA.

7.4.1.3.4 Method of test

Initial conditions

UE is in Connected mode state CELL_URA; BMC entity is established

SS: 1 cell,

NOTE: The CB message ID stored on the SIM shall be known for this test (parameter for CBS PDU's). The CBS data type shall be allocated and activated in the UE.

Related ICS/IXIT Statement(s)

ICS: CBS message support - YES/No

IXIT: CBS-Data 1: Bitstring of N*8 (where N≥1 and less than 1246)

NOTE: For CB-Data 1 IXIT, the manufacturer shall define CBS data as Bitstring together with the CB message ID used for transmitting this CB data, which is indicated by the UE after reception in a clear way according to the capabilities stored on the SIM. Furthermore, the manufacturer shall describe the indication on the UE side (e.g. certain CBS traffic information)

Test procedure

- a) The UE in RRC CELL_URA is triggered to wait for the next system information. The UE is activated to receive expected CBS messages as described by the manufacturer,
- b) The UE and the SS have configured their RLC, MAC and PHYs layers with all CB related system information, broadcasted by SS
- c) The SS sends the CBS message containing an activated CBS message type according to CB-Data 1 to the UE, this shall be repeated for "CPREP" times (indicated by parameter "repetition period" in the schedule information)
- d) The UE indicates in an unambiguous way, that this message was received, by certain clear indications (e.g. a unique part of the CB data contents)

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION	Transmit this message as described below on the BCCH, in addition to the regular BCCH transmissions (see RRC test description). Included are CB related system information parameter of the CBS: - CTCH ID, - FACH ID and associated format set, - S-CCPCH ID, - CBS DRX Level 1 information (optional) - optional: Period of CTCH allocation on S-CCPCH - optional: CBS frame offset
2				The SS waits for about 10 s to make sure, that the UE is configured to receive CBS data
3		←	BMC CBS Message	Activated CBS message with CB Data 1 message content as described by the manufacturer. This message shall be repeated "CPREP" times, Parameter: - Message_ID, - Serial-No, - Data coding scheme, - CB-Data 1,
4				After having received the BMC CBS message the UE shall indicate the reception of CB Data 1 in a clear way.

Specific Message Contents

SYSTEM INFORMATION TYPE 6

The contents of SYSTEM INFORMATION TYPE 6 Information Element in this test case are identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] with the following exceptions:

Information Element	Value/remark
CHOICE mode	(see RRC default test settings)
PRACH system information	(see RRC default test settings)
Secondary CCPCH system	
- Secondary CCPCH information	1
- TFCS	(see RRC default test settings)
- FACH/PCH information	1
- TFS	(see RRC default test settings)
- CTCH indicator	TRUE
- PICH info	(see RRC default test settings)

BMC CBS Message

Information Element	Value/remark
Message Type	1 (CBS message)
Message ID	Bitstring (16) CB message ID, it shall fit to the stored Message ID in the SIM inserted in the UE (source and type) [see TS 23.041] according to the transmitted CB-Data 1 content.
Serial Number	[see TS 23.041]
- Geographic Scope Indicator (2 bit)	11 (Normal Cell wide)
- Message Code (10 bit)	in accordance with the Message ID
- Update Number (4 bit)	for a new message: 0000, incremented by one for each repetition
Data Coding Scheme	Bitstring (16) ID of the alphabet/coding and the applied language [see TS 23.041]
CB Data	Bitstring (N*8), [see IXIT value: CB-Data 1]

7.4.1.3.5 Test requirements

The UE shall store and decode a received activated CBS message.

7.4.2 BMC message reception procedure

7.4.2.1 Reception of certain CBS message types

7.4.2.1.1 Definition and applicability

Applicable only for a UE supporting Cell Broadcast Services (CBS) as type of Broadcast/Multicast Services.

It shall be possible to indicate the reception of two different CBS message contents carried with different activated CB message types in a clear way on the UE side.

It shall be possible to activate/deactivate the CBS message types used to receive CB Data 1 or 2.

7.4.2.1.2 Conformance requirement

A UE supporting Cell Broadcast Service (CBS) shall be capable to receive BMC messages in RRC Idle mode.

The BMC entity on the UE side evaluates received BMC Schedule Messages and takes decisions which BMC messages are received.

If not otherwise requested by upper layers, only those CB messages received in BMC CBS Messages are delivered to upper layers for which the Serial Number associated with the CB message has changed. This implies that the BMC shall store the last received Serial Number of each CB message activated by upper layers.

Reference(s)

TS 25.324 subclause 9.1

TS 25.324 subclause 9.4

7.4.2.1.3 Test purpose

1. To verify, that a UE supporting CBS ignores a deactivated CBS message type which has been broadcasted by SS.
2. To verify, that a UE only stores Serial Numbers of a newly transmitted CBS messages. This shall be verified by indication of a received CBS message with changed Serial Number as indication for the storage of Serial Numbers.

7.4.2.1.4 Method of test

Initial conditions

UE is in RRC Idle mode,

SS: 1 cell,

NOTE: The CB message ID stored on the SIM shall be known for this test (as parameter for the CBS message PDU). The CBS data type shall be allocated and in the UE. It shall be possible to activate/deactivate such CBS data type.

Related ICS/IXIT Statement(s)

ICS: CBS message support - YES/No

IXIT: - CBS-Data 1: Bitstring of $N \times 8$ (where $N \geq 1$ and less than 1246), with used CB message ID for CB-Data 1

- CBS-Data 2: Bitstring of $N \times 8$ (where $N \geq 1$ and less than 1246), with used CB message ID for CB-Data 2 (CB message ID for CB-Data 1 shall be different to CB message ID for CB-Data 2)

NOTE: For CBS data IXIT's, the manufacturer shall define CBS data as Bitstring as described in the IXIT, which is indicated by the UE after reception in a clear way according to the capabilities stored on the SIM. The manufacturer shall describe the indication on the UE side for both CBS data types (e.g. certain CBS broadcast information shown in the display of the UE)

Test procedure

- a) The UE in RRC Idle mode is triggered to wait for the next system information. The UE is activated to receive expected CBS messages (CBS data 1 and CBS data 2) as described by the manufacturer,
- b) The UE and the SS have configured their RLC, MAC and PHYs layers with all CB related system information, broadcasted by SS
- c) The SS sends the CBS message containing CBS data (CB-Data 1) as described by the manufacturer to the UE, this shall be repeated for "CPREP" times (as indicated by the parameter "repetition period" in the schedule information)
- d) The UE indicates on an unambiguous way, that this CBS data message (CB-Data 1) has been received by the UE (e.g. a unique part of the CBS data contents shown in the display)
- e) The SS sends a CBS Schedule message (inband schedule message) containing CB schedule parameter for the following CBS data message (CB-Data 2 as described by the manufacturer)

- f) The SS sends the new CBS message containing CBS data (CB-Data 2) as described by the manufacturer to the UE, this shall be repeated for "CPREP" times (as indicated by the parameter "repetition period" in the schedule information))
- g) The UE indicates on an unambiguous way, that this CBS data message (CB-Data 2) has been received by the UE (e.g. a unique part of the CBS data contents shown in the display)
- h) The UE deactivates the CB Message type ID used for CB-Data 1,
- i) The SS sends a CBS Schedule message (inband schedule message) containing schedule parameter for the next CBS data (CB-Data 1)
- j) The SS sends the CBS message containing CBS data (CB-Data 1) as described by the manufacturer to the UE, this shall be repeated for "CPREP" times (as indicated by the parameter "repetition period" in the schedule information)
- k) The UE ignores the newly received CBS data message (CB-Data 1), i.e. there is no indication as described in step d)

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION	Transmit these messages as described below on the BCCH, in addition to the regular BCCH transmissions. Included are all CB related system information parameter of the CBS: - CTCH ID, - FACH ID and associated format set, - S-CCPCH ID, - CBS DRX Level 1 information (optional) - Period of CTCH allocation on S-CCPCH (optional) - CBS frame offset (optional)
2				The SS waits for about 10 s to make sure, that the UE is configured to receive the CBS Data message
3				Activated CBS message with certain CB data content (CBS data 1 as described by the manufacturer). This message shall be repeated "CPREP" times, Parameter: - Message_ID, - Serial-No, - Data coding scheme, - CB-Data 1
4				After having received the BMC CBS message (CB-Data 1) the UE shall indicate the reception in a clear way.
5	←		BMC CBS Schedule	Inband CBS schedule message with schedule parameter for the next CBS data message (CB-Data 2).
6	←		BMC CBS Message	Activated CBS message with certain CBS data content (CB-Data 2 as described by the manufacturer). This message shall be repeated "CPREP" times, Parameter: - Message_ID, - Serial-No, - Data coding scheme, - CB-Data 2
7				After having received the BMC CBS message (CBS data 2) the UE shall indicate the reception in a clear way. This implies that the changed Serial Number of the CBS message has been stored on the UE.
8	←		BMC CBS Schedule	The UE deactivates "CB message type ID" used for CB-Data 1
9				Inband CBS schedule message with schedule parameter for the next CB data message (CB-Data 1)
10				CBS message with certain CBS data content (CB-Data 1 as described by the manufacturer). This message shall be repeated "CPREP" times, Parameter: - Message_ID, - Serial-No, - Data coding scheme, - CB-Data 1

11		After having received the BMC CBS message (CB-Data 1) the UE shall ignore the newly received CBS data 1 message, i.e. there is no indication as described by the manufacturer.

Specific Message Contents

SYSTEM INFORMATION TYPE 6

The contents of SYSTEM INFORMATION TYPE 6 Information Element in this test case are identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] with the following exceptions:

Information Element	Value/remark
CHOICE mode	(see RRC default test settings)
PRACH system information	(see RRC default test settings)
Secondary CCPCH system	
- Secondary CCPCH information	1
- TFCS	(see RRC default test settings)
- FACH/PCH information	1
- TFS	(see RRC default test settings)
- CTCH indicator	TRUE
- PICH info	(see RRC default test settings)

BMC CBS Message (Step 3)

Information Element	Value/remark
Message Type	1 (CBS message)
Message ID	Bitstring (16) CB message ID, it shall fit to the stored Message ID in the SIM inserted in the UE (source and type) [see TS 23.041]
Serial Number	[see TS 23.041]
- Geographic Scope Indicator (2 bit)	11 (Normal Cell wide)
- Message Code (10 bit)	according with the Message ID
- Update Number (4 bit)	for a new message: 0000, incremented by one for each repetition
Data Coding Scheme	Bitstring (16) ID of the alphabet/coding and the applied language [see TS 23.041]
CB Data	Bitstring (N*8), [see IXIT value: CB-Data 1]

BMC CBS Message (Step 6)

Information Element	Value/remark
Message Type	1 (CBS message)
Message ID	Bitstring (16) CB message ID, it shall fit to the stored Message ID in the SIM inserted in the UE (source and type) [see TS 23.041]
Serial Number	[see TS 23.041]
- Geographic Scope Indicator (2 bit)	11 (Normal Cell wide)
- Message Code (10 bit)	according with the Message ID
- Update Number (4 bit)	for a new message: 0000, incremented by one for each repetition
Data Coding Scheme	Bitstring (16) ID of the alphabet/coding and the applied language [see TS 23.041]
CB Data	Bitstring (N*8), [see IXIT value: CB-Data 2]

BMC CBS Message (Step 10)

Information Element Message Type	Value/remark 1 (CBS message)
Message ID	Bitstring (16) CB message ID, it shall fit to the stored Message ID in the SIM inserted in the UE (source and type) [see TS 23.041]
Serial Number - Geographic Scope Indicator (2 bit) - Message Code (10 bit) - Update Number (4 bit)	[see TS 23.041] 11 (Normal Cell wide) according with the Message ID for a new message: 0000, incremented by one for each repetition
Data Coding Scheme	Bitstring (16) ID of the alphabet/coding and the applied language [see TS 23.041]
CB Data	Bitstring (N*8), [see IXIT value: CB-Data 1]

BMC Schedule Message (Step 5 and Step 9)

The parameters for BMC Schedule Message (inband schedule message) in Step 5 are inserted for CB-Data 2 and in Step 8 for CB-Data 1.

Information Element Message Type	Value/remark 2 (Schedule message)
Offset to begin CTCH BS index	calculated offset value of the BS (Integer: 0...255) as recommended in TR 25.925
Length of CBS Schedule Period	Number of consecutive CTCH BS of the next CBS Schedule Period, (Integer: 1...255) as recommended in TR 25.925
New Message Bitmap	Bitmap (N*8), N = Length of CBS Schedule Period as recommended in TR 25.925
Message Description - Message Description Type	1 for new message (see TS 25.324, Table 11.9-3) 5 for old message (see TS 25.324, Table 11.9-3)
- Message ID	CB message ID used for the next CB data
- Offset to CTCH (BS index of first transmission)	for Message description type 1 or 5: CB message ID IE included (see TS 23.041)

7.4.2.1.5 Test requirements

After having received the CB-Data 1 message (step 3), the UE shall store the Serial Number of this message and indicate the reception of the CBS message as described by the manufacturer.

After having received the CB-Data 2 message (step 6), the UE shall store the Serial Number of this message and indicate the reception of the CBS message as described by the manufacturer.

After CB-Data 1 message was broadcasted and repeated "CREP" times (step 9), the UE shall not indicate the reception for the deactivated CBS message (CB-Data 1).

3G CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123 CR 031

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T #9**

List expected approval meeting # here
↑

for approval
for information

X

strategic
non-strategic

(for SMG
use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

Nokia UK Ltd

Date:

2000-08-28

Subject:

Corrections to clause 8 – Radio Resource Control

Work item:

Category:

F	Correction	X
A	Corresponds to a correction in an earlier release	
B	Addition of feature	
C	Functional modification of feature	
D	Editorial modification	

(only one category

shall be marked

with an X)

Release:

Phase 2	
Release 96	
Release 97	
Release 98	
Release 99	X
Release 00	

Reason for change:

Editorial changes, correction of inconsistencies between the test procedure and the expected sequence and clarification of information in the testcases.

Clauses affected:

8.1.1, 8.1.2, 8.1.4, 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.6, 8.2.9, 8.3.1, 8.3.2, 8.4.1

Other specs

Other 3G core specifications

→ List of CRs:

Affected:

Other GSM core specifications

→ List of CRs:

MS test specifications

→ List of CRs:

8. Layer 3

8 Radio Resource Control RRC

8.1 RRC Connection Management Procedure

8.1.1 Paging

8.1.1.1 Paging for Connection in idle mode

8.1.1.1.1 Definition

8.1.1.1.2 Conformance requirement

In idle mode, UE monitors the paging occasions determined using parameters from SYSTEM INFORMATION BLOCK messages. When the UE receives a PAGING TYPE 1 message transmitted on PCCH during one of its assigned paging occasions, it should attempt to establish an RRC connection.

Reference

3GPP TS 25.331 clause 8.1.2, 3GPP TS 25.211 clause 5.3.3.7, 3GPP TS 25.304 clause 8.

8.1.1.1.3 Test purpose

To confirm that the UE establishes an RRC connection after it receives a PAGING TYPE1 message which includes IE "Paging Record"(UE identity) set to the IMSI of the UE.

8.1.1.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :Idle state with a CN UE identity (set to IMSI).

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched CN UE identity for the UE in the idle state. The UE shall not change its state. The SS transmits a PAGING TYPE1 message, which includes a matched CN UE identity for the UE in the idle state. During transmission of PAGING TYPE 1 messages, SS selects the correct paging indicator on the PICH in order to allow the UE to respond to paging. Then the UE transmits an RRC CONNECTION REQUEST to the SS, the SS transmits an RRC CONNECTION SETUP to the UE. When the UE receives this message, the UE establishes an RRC connection.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See specific message contents.
2		←	PAGING TYPE1	The SS transmits the message, which includes an unmatched identity (incorrect IMSI), then the UE does not change its state.
3		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI).
4		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause" – must "Terminating Call" "Protocol Indicator" – must be FALSE
5		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish an RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE13

Information Element	Value/remark
CN domain system information list	Only 1 entry
CN domain system information	
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE CN Type	Supported CN type
- CN domain specific NAS system information	Default
- CN domain specific DRX cycle length coefficient	2
UE Timers and constants in idle mode	
- T300	5 sec.
- N300	3
- T312	10 sec
- N312	200

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified)
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to an arbitrary octet string of length 7 bytes which is different from the IMSI value stored in the USIM card.

PAGING TYPE 1 (Step 3)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified)
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card

8.1.1.1.5

Test requirement

After step 2 the UE shall not transmit on the uplink CCCH in order to establish a RRC connection.
After step 5 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.1.2 Paging for Connection in connected mode (CELL_PCH)

8.1.1.2.1 Definition

8.1.1.2.2 Conformance requirement

In CELL_PCH state, a UE can respond to a paging request from UTRAN. In this case, the UTRAN has requested to establish a connection with the UE. The UE should then attempt to perform a cell update procedure and move to CELL_FACH state in order to respond to the paging using uplink CCCH.

Reference

3GPP TS 25.331 clause 8.1.2

8.1.1.2.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE1 message which indicates that the paging has originated from UTRAN. To verify that the UE performs cell update procedure after entering the CELL_FACH state.

8.1.1.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :CELL_PCH state with a U-RNTI

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched U-RNTI in CELL_PCH state . The UE does not change its state. Then SS transmits a PAGING TYPE 1 message with a matched identifier but originates from the CN instead of UTRAN. The UE should not change state after receiving this message. The SS transmits a PAGING TYPE1 message, which includes a matched U-RNTI in the connected state. Then the UE enters the CELL_FACH state and performs the cell updating procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See specific message contents
2		←	PAGING TYPE1	The SS transmits a message including an unmatched identifier. UE shall not respond to the paging.
3		←	PAGING TYPE1	The SS transmits a message includes a matched identifier but with the originator being the CN, UE shall not respond to the paging.
4		←	PAGING TYPE 1	The SS transmits the message with the UTRAN being the originator and including the UE's assigned U-RNTI
5		→	CELL UPDATE	The UE enters the CELL_FACH state. UE performs cell updating procedure. The CELL UPDATE message shall contain the value "Cell Update Cause" set to "paging response".

Specific Message Contents

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to an arbitrary 16-bit string which is different from the SRNC identity assigned.
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.

PAGING TYPE 1 (Step 3)

Same as the PAGING TYPE 1 message as in Clause 8.1.1.1.4, with the exception that the “BCCH modification info” IE should be omitted in the message.

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	CN originator
- U-RNTI	
- SRNC Identity	Set to the same SRNC identity as previously assigned.
- S-RNTI	Set to the same S-RNTI as previously assigned.

SYSTEM INFORMATION BLOCK TYPE 12

Same as the SYSTEM INFORMATION BLCOK TYPE 13 message used in Clause 8.1.1.1.3.

8.1.1.2.5 Test requirement

After step 2 the UE shall not change its state.

After step 3 the UE shall not change its state.

After step 4 the UE shall enter the CELL FACH state and send a CELL UPDATE message with “Cell Update Cause” IE set to “paging response”.

8.1.1.3 Paging for Connection in connected mode(URA_PCH)

8.1.1.3.1 Definition

8.1.1.3.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 1 message from the network to selected UEs in URA_PCH state using the paging control channel (PCCH). The UE listens to it and then enters the CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.1.2

8.1.1.3.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE1 message which includes IE “Paging Record”(U-RNTI) for the UE and which is set to “CN” in IE“paging originator”.

8.1.1.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :URA_PCH state with a U-RNTI

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched U-RNTI in URA_PCH state. The UE does not change its current state. The SS transmits a PAGING TYPE1 message which includes a matched U-RNTI in the connected state. Then the UE listens to it and enters the CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE1	The SS transmits the message includes an unmatched identifier, then the UE does not change its state.
2		←	PAGING TYPE1	The SS transmits the message includes a matched identifier.
3		→	CELL UPDATE	The UE enters the CELL_FACH state.

Specific Message Contents

PAGING TYPE 1 (Step 1)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to an unused SRNC identity which is different from the SRNC identity assigned.
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to the previously assigned SRNC identity
- S-RNTI	Set to previously assigned S-RNTI

8.1.1.3.5 Test requirement

After step 1 the UE shall not change its state.

After step 2 the UE shall enter the CELL FACH state, and transmit CELL UPDATE message to initiate the cell updating procedure with the paging cause set to “paging response”.

8.1.1.4 Paging for Notification in idle mode

8.1.1.4.1 Definition

8.1.1.4.2 Conformance requirement

When a system information blocks on the BCCH is modified, the message PAGING TYPE1 can be sent on the PCCH to inform the UE about the changes which is currently operating in the idle mode. The message includes the IE "BCCH Modification Information".

Reference

3GPP TS 25.331 clause 8.1.1.2

8.1.1.4.3 Test purpose

To confirm that the UE checks the included new value tag of the master information block and read the SYSTEM INFORMATION after it receives a PAGING TYPE1 message which includes the IE "BCCH Modification Information".

8.1.1.4.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : Idle state with a CN UE identity .

Test Procedure

The UE is in the idle state before changing SYSTEM INFORMATION BLOCK TYPE 1 message. The SS transmits a PAGING TYPE1 message on the paging occasions assigned to the UE. The message shall include the IE "BCCH Modification Information" indicating the starting time when the BCCH system information is modified. Simultaneously, SS continuously send MASTER INFORMATION BLOCK with the "MIB Value Tag" changed. The modified SYSTEM INFORMATION BLOCK TYPE 1 message shall be transmitted continuously too. The IE "DRX Cycle Length Coefficient" is altered with respect to the original IE. The SS shall wait until the stated starting time and transmit PAGING TYPE 1 message. The message shall address the UE using its IMSI and "paging cause" IE set to "terminating call" supported by the UE. The UE shall react to the PAGING TYPE 1 message and send a RRC_CONNECTION_REQUEST message to SS.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	SS transmits information on BCCH in order for UE to listen to one of the S-CCPCH physical channel, which carries PAGING TYPE 1 messages on PCCH. Relevant paging parameters are also broadcasted.
2		←	PAGING TYPE 1	SS transmits the message includes the IE"BCCH Modification Information", with the "Value Tag" changed from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to 4094 radio frame from the current SFN.
3		←	MASTER INFORMATION BLOCK	SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting.
		←	SYSTEM INFORMATION BLOCK TYPE 13	At the same time, SS starts to transmit the affected modified message continuously. The value of IE "DRx Cycle Length Coefficient" is changed in this message.
4		←	PAGING TYPE 1	SS transmits this message continuously on the PCCH according to the new value of "DRx Cycle Length Coefficient".
5				SS starts to monitor the uplink RACH after approximately 4096 radio frames from step 2.
6		→	RRC CONNECTION REQUEST	UE transmits a request due to answer to the PAGING TYPE 1 received in step 5. The IE "Establishment Cause" should be set to "Terminating Call" supported by the UE and the "Initial UE Identity" set to UE's IMSI.
7		←	RRC CONNECTION REJECT	UE shall return to idle mode after receiving this message

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 13 (Step 1)

Information Element	Value/remark
CN domain system information list	Only 1 entry
CN domain system information	
- CN domain identity	Default
- CHOICE CN Type	Supported CN type
- CN domain specific NAS system information	Default
- CN domain specific DRX cycle length coefficient	12
UE Timers and constants in idle mode	
- T300	Default
- N300	Default
- T312	Default
- N312	Default

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI Identity BCCH modification info MIB Value Tag BCCH Modification time	Only 1 entry UTRAN originator Arbitrarily selected SRNC identity which is different from current identity Arbitrarily selected S-RNTI identity which is different from current identity 2 4094

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 13 (Step 3)

Information Element	Value/remark
CN domain system information list CN domain system information - CN domain identity - CHOICE CN Type - CN domain specific NAS system information - CN domain specific DRX cycle length coefficient UE Timers and constants in idle mode - T300 - N300 - T312 - N312	Only 1 entry Default Supported CN type Default 4 Default Default Default Default

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list Paging record - CHOICE Paging originator - Paging Cause - CN Domain Identity - CHOICE UE Identity - IMSI	Only 1 entry CN originator Terminating Speech Call CS Domain IMSI Set to the same octet string as in the IMSI value stored in the USIM card

RRC CONNECTION REJECT (Step 7)

Information Element	Value/remark
Initial UE identity - CHOICE UE id type - IMSI Rejection cause Wait time Redirection info	IMSI Set to the same octet string as in the IMSI value stored in the USIM card Unspecified 0 Not Present

8.1.1.4.5 Test requirement

After step 6 the UE shall transmit RRC CONNECTION REQUEST message in response to the PAGING TYPE 1 message.

8.1.1.5 Paging for Notification in connected mode (CELL_PCH)

8.1.1.5.1 Definition

8.1.1.5.2 Conformance requirement

When a system information block on the BCCH is modified, the message PAGING TYPE1 can be sent on the PCCH to inform the UE about this change in the CELL_PCH state. The message shall include the IE"BCCH Modification Information".

Reference

3GPP TS 25.331 clause 8.1.1, 2

8.1.1.5.3 Test purpose

To confirm that the UE enters the CELL_FACH state, checks the included new value tag of the master information block, and read the SYSTEM INFORMATION messages after it receives a PAGING TYPE1 message which includes the IE"BCCH Modification Information",

8.1.1.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_PCH state with a U-RNTI.

Test Procedure

Test steps 1 to 5 under Clause 8.1.1.4 can be applied to this test. However, the PAGING TYPE 1 messages used in step 2 and step 4 need to be altered. The changes are indicated in the specific message content paragraph under this clause. At step 6, UE shall send the CELL UPDATE message indicating the "cell update cause" to be "paging response". SS then replies with a CELL UPDATE CONFIRM message to allow the UE to transit to CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	SS transmits information on BCCH in order for UE to listen to one of the S-CCPCH physical channel, which carries PAGING TYPE 1 messages on PCCH. Relevant paging parameters are also broadcasted.
2		←	PAGING TYPE 1	SS transmits the paging message which comprises IE "BCCH Modification Information", with the "Value Tag" changed from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to 4094 radio frame from the current SFN.
3		←	MASTER INFORMATION BLOCK	SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting.
		←	SYSTEM INFORMATION BLOCK TYPE 13	At the same time, SS starts to transmit the affected modified message continuously. The value of IE "DRx Cycle Length Coefficient" is changed in this message.
4		←	PAGING TYPE 1	SS transmits this message continuously on the PCCH according to the new value of "DRx Cycle Length Coefficient". This message shall page the UE with its U-RNTI and setting the UTRAN as the paging originator.
5				SS starts to monitor the uplink RACH after approximately 4096 radio frames from step 2.
6		→	CELL_UPDATE	The IE "Cell Update Cause" should be set to "Paging Response" and the IE "U-RNTI" shall be similar to the UE's U-RNTI value. The "Protocol Error Indicator" IE shall be set to FALSE.
7		←	CELL_UPDATE CONFIRM	UE shall transit to CELL_FACH state after receiving this message.

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 13 (Step 1)

The content of this message is the same in the message used in step 1 specified in Clause 8.1.1.4.3.

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to a different string from currently allocated SRNC identity
- S-RNTI	Set to an arbitrary 20-bits string
BCCH modification info	
- MIB Value Tag	
- BCCH Modification time	2 4094

MASTER INFORMATION BLOCK (Step 3)

SYSTEM INFORMATION BLOCK TYPE 13 (Step 3)

The content of this [message](#) is the same in the message used in step 3 specified in Clause 8.1.1.4.34.

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI BCCH modification info	Only 1 entry UTRAN originator Equal to the U-RNTI assigned earlier. Same as the current SRNC allocated Same as the current S-RNTI allocated Not Present

CELL_UPDATE_CONFIRM (Step7)

Information Element	Value/remark
DRX Indicator	DRx with Cell Updating

8.1.1.5.5 Test requirement

After step 6 the UE shall transmit a CELL_UPDATE message with "cell update cause" IE set to "paging response". Upon receiving CELL_UPDATE_CONFIRM message, the UE shall enter the CELL_FACH state.

8.1.1.6 Paging for Notification in connected mode (URA_PCH)

8.1.1.6.1 Definition

8.1.1.6.2 Conformance requirement

When a system information block on the BCCH is modified, the message PAGING TYPE1 can be sent on the PCCH to inform UE about the changes in the URA_PCH state. The message includes the IE"BCCH Modification Information".

Reference

3GPP TS 25.331 clause 8.1.1, 2

8.1.1.6.3 Test purpose

To confirm that the UE enters the CELL_FACH state, checks the included new value tag of the master information block, reads the SYSTEM INFORMATION after it receives a PAGING TYPE 1 message which includes the IE"BCCH Modification Information".

8.1.1.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : URA_PCH state with a U-RNTI.

Test Procedure

The UE is in the URA_PCH state before it the SS starts changing SYSTEM INFORMATION BLOCK messages. SS modifies its SYSTEM INFORMATION and updates the "value tag" of both the SYSTEM INFORMATION BLOCK [TYPE 1](#) and of the MASTER INFORMATION BLOCK. After a while, the SS transmits a PAGING TYPE 1 message, which includes the IE" BCCH Modification Information". The UE enters the CELL_FACH state and reads the modified SYSTEM INFORMATION BLOCK. The UE shall act according to the modified message. In this testcase, the UE shall adjust it paging occasions and read the new PCCH blocks newly assigned to it under DRX mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION	The SS changes the SYSTEM INFORMATION when the UE is in the connected state (URA_PCH).
2		←	PAGING TYPE 1	SS transmits the message includes the IE"BCCH Modification Information".
3				The UE enters the CELL_FACH state and reads the SYSTEM INFORMATION and then the UE follows this message.

Specific Message Contents

None

8.1.1.6.5 Test requirement

After step 2 the UE shall enter the CELL_FACH state and read the SYSTEM INFORMATION message and follow it.

8.1.1.7 Paging for Connection in connected mode (CELL_DCH)

8.1.1.7.1 Definition

8.1.1.7.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 2 message from the network to selected UEs in CELL_DCH state using the dedicated control channel(DCCH). The UE listens to it and responds to this message accordingly.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.1.7.3 Test purpose

To confirm that the UE responds this message after it receives a PAGING TYPE2 message which includes IE "Paging Record Type Identifier" for the UE.

8.1.1.7.4 Method of test

Initial Condition

System Simulator : 1 cell.

UE : CELL_DCH state

Test Procedure

The SS transmits a PAGING TYPE 2 message which includes a unmatched Paging Record Type Identifier in CELL_DCH state. The UE shall not respond to this message. SS pages the UE again, this time with a matched Paging Record Type Identifier but with the IE"paging cause" set to one of the spare values. UE shall respond by transmitting a RRC STATUS message on the DCCH using RLC-AM mode. Finally, SS transmits a PAGING TYPE 2 message, which includes a matched Paging Record Type Identifier. Then the UE shall responds to this message by the transmission of an upper layer message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE 2	The SS transmits the message includes an unmatched identifier, then the UE does not respond.
2		←	PAGING TYPE 2	The SS transmits the message includes a matched identifier. In the paging message, IE "paging cause" is set to one of the spare values.
3	→	←	RRC STATUS	The UE shall respond by reporting the protocol error to the SS.
4		←	PAGING TYPE 2	SS pages the UE with a matched identifier and with a valid "paging cause" IE. The UE shall respond to the paging message in step 2.
5	→	→	UPLINK DIRECT TRANSFER	The UE shall respond to the paging message sent in step 24.

Specific Message Contents

PAGING TYPE 2 (Step 1)

Information Element	Value/remark
Paging cause	Terminating Call supported by the UE
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	Unsupported IMSI

PAGING TYPE 2 (Step 2)

Information Element	Value/remark
Paging cause	Use one of the 3 spare values
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	Supported IMSI

RRC STATUS (Step 3)

Information Element	Value/remark
Protocol error information	Checked to see if set to "Information element value not comprehended"

PAGING TYPE 2 (Step 4)

Information Element	Values/Remarks
Paging cause	Terminating Call supported by the UE
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	Supported IMSI

[UPLINK DIRECT TRANSFER \(Step 5\)](#)

[Only the message type IE for this message is checked.](#)

8.1.1.7.5 Test requirement

After step 1 the UE shall not respond to the paging message on the DCCH.

After step 2 the UE shall respond to the paging message by transmitting RRC STATUS on the DCCH, stating the protocol error as "Information element value not comprehended".

After step 4 the UE shall respond to the paging message [by transmitting a UPLINK DIRECT TRANSFER message on the uplink DCCH.](#)

8.1.1.8 Paging for Connection in connected mode (CELL_FACH)

8.1.1.8.1 Definition

8.1.1.8.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 2 message from the network to selected UEs in CELL_FACH state using the dedicated control channel (DCCH). The UE shall listen to it and responds to this message accordingly.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.1.8.3 Test purpose

To confirm that the UE responds this message after it receives a PAGING TYPE 2 message which includes IE "Paging Record Type Identifier" for the UE.

8.1.1.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :CELL_FACH state.

Test Procedure

The SS transmits a PAGING TYPE 2 message, which includes an unmatched Paging Record Type Identifier in CELL_FACH state. The UE does not respond to this message. The SS transmits a PAGING TYPE2 message which includes a matched Paging Record Type Identifier. Then the UE responds to this message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE2	The SS transmits the message includes ~~aan~~ unmatched identifier, then the UE does not respond.
2		←	PAGING TYPE2	The SS transmits the message includes a matched identifier.
3				The UE responds.

Specific Message Content

PAGING TYPE 2 (Step 1)

Use the same message content as in step 1 from 8.1.1.7.4

PAGING TYPE 2 (Step 2)

Use the same message content as in step 4 from 8.1.1.7.4

8.1.1.8.5 Test requirement

After step 1 the UE shall not respond.

After step 2 the UE shall respond.

8.1.2 RRC Connection Establishment

8.1.2.1 RRC Connection Establishment in CELL_DCH state: Success

8.1.2.1.1 Definition

8.1.2.1.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message. This message shall include the IE"Initial UE identity" and is to be transmitted on the uplink CCCH.
2. After the UE receives an RRC CONNECTION SETUP message which includes the same value of the IE" Initial UE identity" ,radio resource parameters(i.e. Signalling link type and multiplexing info) and U-RNTI The UE then configures the layer 2 and layer 1 processing so as to support the DCCH

according to the radio resource parameters specified. The procedure successfully ends when the network receives an RRC CONNECTION SETUP COMPLETE message on the uplink DCCH.

Reference

3GPP TS 25.331 clause 8.1.3

8.1.2.1.3 Test purpose

To confirm that the UE leaves the Idle Mode and correctly establishes a signalling link on the DCCH.

8.1.2.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: Idle state

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by attempting to make an outgoing call . After SS receives this message, it assigns the necessary radio resources and U-RNTI to be used by the UE and then transmits an RRC CONNECTION SETUP message to the UE within timer T300. SS then waits for the UE to transmit an RRC CONNECTION SETUP COMPLETE message on the DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		RRC CONNECTION REQUEST	By outgoing call operation
2		←	RRC CONNECTION SETUP	This message is not addressed to the UE.
3	→		RRC CONNECTION REQUEST	UE shall re-transmit the request message again after receiving a setup message not addressed to itself.
4		←	RRC CONNECTION SETUP	
5				The UE configures the layer 2 and layer 1 .
6	→		RRC CONNECTION SETUP COMPLETE	

Specific Message Content

RRC CONNECTION SETUP (Step 2):

Information Element	Value/remark
Initial UE Identity CHOICE UE id type IMSI	IMSI Set to an arbitrary octet string of length 7 which different from the IMSI value stored in the USMI card.

8.1.2.1.5 Test requirement

After step 2 the UE shall re-transmit the RRC CONNECTION REQUEST message again in order to continue the RRC connection establishment procedure.

After step6 the UE shall establish an RRC connection and continue the procedure of the outgoing call on the DCCH.

8.1.2.2 RRC Connection Establishment: Success after T300 timeout

8.1.2.2.1 Definition

8.1.2.2.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode. The UE shall transmit an RRC CONNECTION REQUEST message which includes the IE"Initial UE identity". This message shall be sent on the uplink CCCH.

2. In the case of a failure to establish the RRC connection at the expiry of timer T300, the UE retries to establish the RRC connection until V300 is greater than N300.
3. When the UE receives a RRC CONNECTION SETUP message, which contains a protocol error and causing the internal variable PROTOCOL_ERROR_REJECT set to TRUE, it shall perform the appropriate error handling procedure.

Reference

3GPP TS 25.331 clause 8.1.3

8.1.2.2.3 Test purpose

To confirm that the UE retries to establish the RRC connection until V300 is greater than N300 after the expiry of timer T300 when the SS transmits no response for an RRC CONNECTION REQUEST message.

8.1.2.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: Idle state

Test Procedure

Before the test starts, an internal counter K in SS is initialized to a value = 1. Following this, the UE shall transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH, after the operator attempts to make an outgoing call. ~~The SS ignores this message, and then increments K every time such a message is received and waits for T300 timer to expire. This cycle is repeated until K reaches N300.~~ If When K is equal to N300, the SS transmits the RRC CONNECTION SETUP message specified in step 5 to the UE and wait until T300 expires, and establishes an RRC connection with the UE. Otherwise SS waits for a duration T300 and increases K by 1. This cycle is repeated until K reaches N300. The UE shall send another RRC CONNECTION REQUEST message on the uplink CCCH. SS verifies that the UE does not access the radio resource allocated in step 5. After confirming this restriction is observed, SS replies with a valid RRC CONNECTION SETUP message. The UE shall then acknowledge the establishment of RRC connection by sending the RRC CONNECTION SETUP COMPLETE message on uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS initializes counter K to 1 . Operator is asked to make an outgoing call and SS starts to wait for RRC CONNECTION REQUEST on uplink <u>DCCH</u> .
2		→	RRC CONNECTION REQUEST	
3				SS checks to see if K is equal to N300-1. If so, goes to step 5. Else, continues to execute step 4.
4				SS increments K. The next step is step 2.
5		←	RRC CONNECTION SETUP	The message contains a protocol error, see specific message content. <u>SS waits for T300 to expire again.</u>
6		→	RRC CONNECTION REQUEST	<u>UE shall not access the radio resource indicated in RRC CONNECTION SETUP message sent in step 5.</u>
7		←	RRC CONNECTION SETUP	This is a legal message. See the clause <u>6.1 in TS 34.108</u> on default message content for RRC.
8				The UE configures the layer 2.
9		→	RRC CONNECTION SETUP COMPLETE	

Specific Message Contents

RRC CONNECTION SETUP (Step5)

Information Element	Value/remark
Uplink Radio Resource <i>CHOICE channel requirement</i>	Neither PRACH Info (for RACH) nor Uplink DPCH info is chosen. One of the spare value is used.

8.1.2.2.5 Test requirement

After step 5 the UE shall re-send another RRC CONNECTION REQUEST message and not access any radio resources specified in RRC CONNECTION SETUP message sent in step 5.

After step 8- the UE shall transmit an RRC CONNECTION SETUP COMPLETE message and establish an RRC connection on the DCCH logical channel.

8.1.2.3 RRC Connection Establishment: Failure (V300 is greater than N300)

8.1.2.3.1 Definition

8.1.2.3.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message. This message shall include the IE "Initial UE identity" on the uplink CCCH.
2. In the case of a failure to establish the RRC connection after (N300+1) attempts, the UE goes back to idle mode.

Reference

3GPP TS 25.331 clause 8.1.3

8.1.2.3.3 Test purpose

To confirm that the UE stops retrying to establish the RRC connection if V300 is greater than N300 and goes back to idle mode.

8.1.2.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: Idle state

Test Procedure

Before the test starts, SS initializes an internal counter K to 1. The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by an outgoing call operation. SS shall not respond to any RRC CONNECTION REQUEST message, instead the counter K is increased by 1 every time such a message is received. To arrive at the verdict, the SS checks that a total of (N300+1) such messages are received.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS initializes counter K to 1 and then prompts the operator to make an outgoing call.
2		→	RRC CONNECTION REQUEST	
3				SS increments K by 1.
4				If K is greater than N300, goes to step 5 else proceed to step 2.
5				SS monitor the uplink CCCH for a time period enough for UE to goes back to normal service. The exact amount of time to wait shall be derived from TS related to cell selection. If any uplink transmission is detected, the test fails.

Specific Message Contents

None

8.1.2.3.5 Test requirement

- After step 5, counter K shall be equals to (N300+1) and there shall be no uplink transmission in the monitoring period specified in step 5.

8.1.2.4 RRC Connection Establishment: Reject ("wait time" is not equal to 0)

8.1.2.4.1 Definition

8.1.2.4.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message-. This message shall include the IE"Initial UE identity" and is to be sent on the uplink CCCH.
2. After the UE receives an RRC CONNECTION REJECT message which includes IE"wait time" not set to 0, and neither IE"frequency info" nor IE"system info" is present, the UE shall wait for a period specified in the IE"wait time". Thereafter re-transmit an RRC CONNECTION REQUEST message to attempt to establish the RRC connection again. However, either IE"frequency info" or IE"system info" is available in the message, the UE shall attempt to perform cell reselection using these information.

Reference

3GPP TS 25.331 clause 8.1.3

8.1.2.4.3 Test purpose

To confirm that the UE retries to establish the RRC connection after the “wait time” if the UE receives an RRC CONNECTION REJECT message which includes the IE “wait time” not set to 0.

To confirm that the UE perform a cell reselection when receiving an RRC CONNECTION REJECT message, containing relevant frequency information of the target cell to be re-selected.

8.1.2.4.4 Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active and suitable for camping, but cell 1 is transmitted using a larger power. Cell 1 and cell 2 are being transmitted from different 2 UARFCNs.

UE: Idle state

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by an outgoing call operation in cell 1. SS rejects the first request by transmitting an RRC CONNECTION REJECT message which indicates a non-zero wait time. In this message, frequency information for cell 2 is available. SS then waits for RRC CONNECTION REQUEST message on the uplink CCCH of cell 2. SS will also monitor the uplink of cell 1 simultaneously to ensure that all transmission activities from cell 1 have ceased. When the UE has successfully camp onto cell 2, it shall send an RRC CONNECTION REQUEST with the same establishment cause as its previous attempt in cell 1. SS responds with an RRC CONNECTION REJECT message, indicating a non-zero “wait time” and omitting the IE “Redirection Info”. The UE shall observe the wait time period indicated. After the wait time has elapsed, the UE shall re-transmit RRC CONNECTION REQUEST again. Finally, SS transmits an RRC CONNECTION SETUP message to establish an RRC connection with the UE, and the UE replies with an RRC CONNECTION SETUP COMPLETE message and enters CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	SS prompts the operator to make an outgoing call in cell 1.
2		←	RRC CONNECTION REJECT	This message shall includes the IE"wait time" set to 15 seconds and IE"frequency info" set to the UARFCN of cell 2.
3				SS waits for a period of time sufficient for UE to reselect to cell 2. At the same time, it monitor the uplink of cell 1 to make sure that all transmissions have ceased.
4		→	RRC CONNECTION REQUEST	UE shall attempt to re-start an RRC connection establishment procedure in cell 2. The establishment cause shall remained unchanged.
5		←	RRC CONNECTION REJECT	This message shall includes the IE"wait time" set to 15 seconds, but with IE"Redirection Info" absent.
6		→	RRC CONNECTION REQUEST	SS waits until the duration specified in IE"wait time" has elapsed and then listens to the uplink CCCH for a second RRC CONNECTION REQUEST message.
7		←	RRC CONNECTION SETUP	SS sends the message to UE, to setup an RRC connection with the UE.
8				The UE shall configure the layer 2 and layer 1 in order to access the uplink and downlink DCCH assigned.
9		→	RRC CONNECTION SETUP COMPLETE	

Specific Message Contents

RRC CONNECTION REQUEST (Step1)

Information Element	Value/remark
Initial UE Identity	Must be equal to U-RNTI assigned previously
Initial UE Capability	Must be compatible with UE settings in TS25.926
Establishment Cause	Must be "Originating Call"

RRC CONNECTION REJECT (Step2)

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	
Frequency Info	
UARFCN uplink (Nu)	Set to a different UARFCN from uplink carrier of cell 1
UARFCN uplink (Nd)	Not present – assuming a duplex distance of 190MHz.

RRC CONNECTION REQUEST (Step4 and step6)

Same requirement as in step 1.

RRC CONNECTION REJECT (Step5)

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	Not present

8.1.2.4.5 Test requirement

After step 3 the UE shall have successfully re-selected to cell 2, using information transmitted in IE"frequency info" of RRC CONNECTION REJECT message. UE shall trigger the start of RRC connection establishment by transmitting RRC CONNECTION REQUEST. The establishment cause shall be similar to the message sent in step 1.

After step 5 the UE shall observe the period specified in IE"wait time" of an RRC CONNECTION REJECT message and not transmit an RRC CONNECTION REQUEST message in this period.

After step7 the UE shall transmit an RRC CONNECTION SETUP COMPLETE message to SS on uplink DCCH and then establish an RRC connection.

8.1.2.5 RRC Connection Establishment: Reject ("wait time" is not equal to 0 and V300 is greater than N300)

8.1.2.5.1 Definition

8.1.2.5.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message . This message shall include the IE"Initial UE identity" and is to be sent on the uplink CCCH.
2. After the UE receives an RRC CONNECTION REJECT message which includes IE"wait time" not set to 0, and neither IE"frequency info" nor IE"system info" is present, the UE shall wait for a period specified in the IE"wait time".Thereafter it re-transmits an RRC CONNECTION REQUEST message to attempt to establish the RRC connection again. In the case of a failure to establish the RRC connection after (N300+1) attempts, the UE goes back to idle mode.

Reference

3GPP TS 25.331 clause 8.1.3

8.1.2.5.3 Test purpose

To confirm that the UE retries to establish the RRC connection after the "wait time" if the UE receives an RRC CONNECTION REJECT message which specifies a non-zero IE "wait time".

To confirm that the UE stops retrying to establish the RRC connection if V300 is greater than N300 and goes back to idle mode.

8.1.2.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: Idle state

Test Procedure

Before the test starts, SS initializes an internal counter K to 0. The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH, triggered by an outgoing data call operation. SS rejects all requests by transmitting an RRC CONNECTION REJECT message which indicates a non-zero wait time and the counter K is increased by 1 every time such a message is received. To arrive at the verdict, the SS checks that a total of (N300+1) such messages are received.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS initializes counter K to 0 and then prompts the operator to make an outgoing data call.
2		→	RRC CONNECTION REQUEST	Shall be sent on CCCH and contain the correct establishment cause.
3		←	RRC CONNECTION REJECT	This message includes the IE "wait time" set to 15 seconds.
4				SS increments K by 1.
5				If K is greater than N300, goes to step 6. Else SS waits for 15 sec before proceeding to step 2.
6				SS monitor the uplink CCCH for a time period enough for UE to goes back to normal service. The exact amount of time to wait shall be derived from TS related to cell selection. If any uplink transmission is detected, the test fails.

Specific Message Contents

RRC CONNECTION REQUEST (Step2)

Information Element	Value/remark
Initial UE Identity Initial UE Capability Establishment Cause	Must be equal to U-RNTI assigned previously Must be compatible with UE settings in TR25.926 Must be "Originating CS Data Call" or "Originating PS Data Call"

RRC CONNECTION REJECT (Step3)

Information Element	Value/remark
Wait time	15 seconds

8.1.2.5.5 Test requirement

After step 6, counter K shall be equals to (N300+1) and there shall be no uplink transmission in the monitoring period specified in step 6.

8.1.2.6 RRC Connection Establishment: Reject ("wait time" is set to 0)

8.1.2.6.1 Definition

8.1.2.6.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message on the uplink CCCH.
2. In the case of a failure to establish the RRC connection by the reception of a RRC CONNECTION REJECT message which contains IE"wait time" equals to 0 , the UE shall go back to idle mode immediately.

Reference

3GPP TS 25.331 clause 8.1.3

8.1.2.6.3 Test purpose

To confirm that the UE goes back to idle mode, if the SS transmits an RRC CONNECTION REJECT message which includes IE"wait time" set to 0. To confirm that the UE ignores an RRC CONNECT REJECT message not addressed to it. To confirm that the UE is capable of handling an erroneous RRC CONNECTION REJECT message correctly.

8.1.2.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : Idle state

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by making an outgoing call . After the SS receives this message, it transmits an RRC CONNECTION REJECT message which is not addressed to the UE. The UE shall disregard this message and proceed to re-transmit RRC CONNECTION REQUES message upon T300 timer expiry. SS answers the second RRC CONNECTION REQUEST message by transmitting an RRC CONNECTION REJECT message with IE"wait time" set to 15 seconds, but without the mandatory IE"rejection cause". The UE shall continue to send the third RRC CONNECTION REQUEST message after a 15 second lapse. Next, the SS sends a legal RRC CONNECTION REJECT message which is expected to cause the UE to move to idle mode spontaneously. To confirm that finally the UE goes back to idle mode immediately after receiving the reject message, SS shall monitor the uplink CCCH for the next 60 second and verify that there is no further transmission in the uplink direction.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	Test operator is prompted to make an out-going call,
2		←	RRC CONNECTION REJECT	IE"Initial UE identity" contains an identity different from any of the UE identities available.
3		→	RRC CONNECTION REQUEST	UE shall continue to send this message after T300 time-out.
4		←	RRC CONNECTION REJECT	IE"Reject Cause" is omitted, IE"wait time" is set to 15 seconds (maximum).
5		→	RRC CONNECTION REQUEST	UE shall continue to send this message after T300 time-out, but before the expiry of "wait time" IE indicated in RRC CONNECTION REJECT in step 4.
6		←	RRC CONNECTION REJECT	IE"wait time" is set to 0.
7				The UE goes back to idle mode.

Specific Message Contents

RRC CONNECTION REJECT (Step2)

Information Element	Value/remark
Initial UE Identity IMSI	Set to an arbitrary octet string of length 7 bytes, which is different from the IMSI stored in USIM.
Wait time	15 seconds
Redirection Info	Not present

RRC CONNECTION REJECT (Step4)

Information Element	Value/remark
Initial UE Identity IMSI	Set to the identical octet string as the IMSI stored in the USIM card.
Reject Cause	Not Present
Wait time	15 seconds (Maximum)
Redirection Info	Not Present

RRC CONNECTION REJECT (Step6)

Information Element	Value/remark
Initial UE Identity IMSI	Set to the identical octet string as the IMSI stored in the USIM card.
Reject Cause	Congestion
Wait time	0 second
Redirection Info	Not present

Note: T300 is set to 5 seconds and N300 is arbitrarily selected from 4 to 8 in SYSTEM INFORMATION BLOCK TYPE 1 message on BCCH.

8.1.2.6.5 Test requirement

After step 2 and step 4 the UE shall continue to re-transmit an RRC CONNECTION REQUEST message on uplink CCCH, at an interval of 5 seconds (T300).

After step6 the UE shall stop sending an RRC CONNECTION REQUEST message, go back to idle mode immediately and not transmit in the uplink direction again.

8.1.2.7 RRC Connection Establishment in CELL_FACH state: Success

8.1.2.7.1 Definition

8.1.2.7.2 Conformance requirement

During the RRC connection establishment, the UTRAN might assign common physical resource to the UE using an RRC CONNECTION SETUP message. When no information about the physical channels accessible are available from the message, the UE shall utilize the PRACH and S-CCPCH information transmitted on the BCCH and then enter the CELL_FACH. Subsequently, the UE shall establish the required signalling links with the UTRAN using common physical resources.

Reference

3GPP TS25.331 clause 8.1.3

8.1.2.7.3 Test Purpose

To confirm that the UE is able to enter CELL_FACH state and setup signalling links using common physical channels.

8.1.2.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: Idle state

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by attempting to make an outgoing call. After the SS receives this message, it assigns the necessary radio resources and U-RNTI to be used by the UE, and then transmits an RRC CONNECTION SETUP message to the UE within timer T300. SS then waits for the UE to transmit an RRC CONNECTION SETUP COMPLETE message on the DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	Test operator is requested to make an outgoing call. The UE shall transmit this message, indicating the correct establishment cause.
2		←	RRC CONNECTION SETUP	SS omits both IE"Uplink DPCH Info" and IE"Downlink DPCH Info" from the message. ~~However, IE"U-RNTI" is present.~~
3				The UE shall configure the layer 2 and layer 1.
4		→	RRC CONNECTION SETUP COMPLETE	UE shall send this message on the DCCH, carried by the assigned PRACH resources.

Specific Message Content

RRC CONNECTION REQUEST

Information Element	Value/remark
Establishment Cause	Originating PS Data Call

RRC CONNECTION SETUP

For this message, the contents of the message to be used are basically identical to the message sub-type entitled "RRC CONNECTION SETUP message (Transition to CELL_FACH)" found in the default message content part. The following exceptions are applicable in this test:

Information Element	Value/remark
Uplink DPCH Info	Not Present
Downlink information common for all radio links	Not Present
Downlink information per radio link list	Not Present

RRC CONNECTION SETUP COMPLETE

Information Element	Value/remark
UE Radio Access Capability	Checked to see if compatible with the stated capability in PIXIT/PICS statements.

8.1.2.7.5 Test requirements

After step 3 the UE shall establish the RRC connection, and transmit RRC CONNECTION SETUP COMPLETE message on the DCCH using PRACH physical resource specified in system information block messages.

8.1.2.8 RRC Connection Establishment : Invalid system information message reception

8.1.2.8.1

Definition

8.1.2.8.2

Conformance requirement

The UE shall ignore the message and shall not select the cell, if the associated a SYSTEM INFORMATION message on the BCCH which includes the unknown value in the mandatory information element which criticality is set to “reject” in the master information block is broadcasting.

Reference

3GPP TS 25.331 clause 8.1.1 clause 16

8.1.2.8.3

Test purpose

To confirm that the UE does not select the cell if the transmitted SYSTEM INFORMATION message on the BCCH which includes the unknown value in the mandatory information element whose criticality is set to “reject” value in the master information block is broadcasting

8.1.2.8.4

Method of test

Initial Condition

System Simulator : 1 cell

UE : Power off

Test Procedure

The SS broadcasts the SYSEM INFORMATION message on the BCCH which includes the PLMN Type information element having “spare value” in the master information block. When the UE is supplied the power, it finds that the SYSTEM INFORMATION message on the BCCH includes the unknown value in the mandatory information element and the UE shall ignore this message. When an outgoing call is attempted, the test operator shall be informed that the UE is in a “No Service” state. The UE shall not transmit an RRC CONNECTION REQUEST message on the uplink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION	The SS broadcasts the SYSTEM INFORMATION message on the BCCH which includes an unknown value in the mandatory information element whose criticality is set to “reject” in the master information block.
2				The UE is supplied the power.
3				SS waits for 1 minute and then asks the test operator to attempt to make an outgoing call.
4				SS checks that no uplink transmission on CCCH is detected.

Specific Message Contents

SYSTEM INFORMATION(master information block)

The contents of a SYSTEM INFORMATION message in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests, with the following exceptions:

Information Element	Value/remark
PLMN Type	spare value

8.1.2.8.5

Test requirement

After step3 the UE shall not transmit an RRC CONNECTION REQUEST message on the uplink CCCH.

8.1.3 RRC Connection Release

8.1.3.1 RRC Connection Release in CELL_DCH state: Success

8.1.3.1.1 Definition

8.1.3.1.2 Conformance requirement

In case of an RRC connection release from CELL_DCH state, the UTRAN transmits an RRC CONNECTION RELEASE message to the UE using unacknowledged mode on the DCCH. The UE then responds by transmitting an RRC CONNECTION RELEASE COMPLETE message using unacknowledged mode to UTRAN for N308 times, each time at the expiry of T308 timer. Then the UE leaves the RRC connected mode and initiates release of the layer2 signalling link. The RRC Connection Release procedure ends when all UE dedicated resources (such as radio resources and radio access bearers) associated with the RRC connection are released and the UE returns to idle mode.

Reference

3GPP TS 25.331 clause 8.1.4

8.1.3.1.3 Test purpose

To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTION RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.

8.1.3.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH state

Test Procedure

The UE is brought to the CELL_DCH state by prompting the operator to initiate an outgoing call. After the DCCH is established, SS transmits an RRC CONNECTION RELEASE message to the UE to disconnect the connection. SS then waits for the UE to transmit an RRC CONNECTION RELEASE COMPLETE message using unacknowledged mode. SS checks to see if P such messages has been received at each expiry of T308 timer. P is equal to the value of IE "Number of RRC Message Transmissions" in an RRC CONNECTION RELEASE message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after a successful RRC connection establishment by virtue of the operator making an outgoing call.
2		←	RRC CONNECTION RELEASE	SS disconnect the connection established. The value in IE"Number of RRC Message Transmissions" is arbitrarily chosen from 4 to 8 and denoted by P.
3		→	RRC CONNECTION RELEASE COMPLETE	SS waits for the arrival of N308 such message at the expiry of each T308 timer, using unacknowledged mode.
4				The UE releases L2 signalling link and dedicated resources then the UE goes to idle mode.

Specific Message Content

RRC CONNECTION RELEASE (Step2)

Information Element	Value/remark
Number of RRC Message Transmission	Arbitrarily chosen between 4 and 8

8.1.3.1.5 Test requirement

After step2 the UE shall start to transmit P times RRC CONNECTION RELEASE COMPLETE messages at the expiry of each T308 timer.

After step3 the UE shall initiate the release L2 signalling link and dedicated resources, then it shall go to idle mode.

8.1.3.2 RRC Connection Release in CELL_FACH state: Success

8.1.3.2.1 Definition

8.1.3.2.2 Conformance requirement

In case of RRC connection release from CELL_FACH state, the RRC layer entity in the network may issues an RRC CONNECTION RELEASE message using unacknowledged mode on the DCCH. Upon the reception of this message, the UE-RRC transmits an RRC RELEASE COMPLETE message using acknowledged mode to UTRAN on the DCCH and goes back to idle mode after it receives a response from the UTRAN-RLC . If an invalid RRC CONNECTION RELEASE is received, the UE shall perform the appropriate error-handling mechanism and report the error to the UTRAN.

Reference

3GPP TS 25.331 clause 8.1.4

8.1.3.2.3 Test purpose

To confirm that the UE releases the L2 signalling link and resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS. It shall transmit an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS (e.g. the UE-RLC confirms the transmission of the RRC CONNECTION RELEASE COMPLETE message.). If the UE receives an invalid release message, it shall ignore the message and report this event to the SS.

8.1.3.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH state

Test Procedure

The UE is brought to an initial state of CELL_FACH. After the successful establishment of the RRC connection, the SS transmits an RRC CONNECTION RELEASE message to the UE to disconnect the radio link. However, the message contains an error in one of the mandatory IE. As a result, the UE shall not release the RRC connection and reply with RRC STATUS message indicating the error type. Then the SS transmits a second RRC CONNECTION RELEASE message with valid content. When the UE receives this message the UE transmits an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS. Finally, SS checks that the UE performs proper layer 2 release.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_FACH state.
2		←	RRC CONNECTION RELEASE	The message contains an error in one of the conditional IE.
3		→	RRC STATUS	IE"Protocol Error Information" shall be set to "Message Extension Not Comprehended"
4		←	RRC CONNECTION RELEASE	SS sends this message using unacknowledged mode RLC operations on the uplink DCCH.
5		→	RRC CONNECTION RELEASE COMPLETE	The UE transmits this message using acknowledged mode.
6				The UE releases L2 signaling link and radio resources then the UE goes to idle mode.

Specific Message Contents

RRC CONNECTION RELEASE (Step 2)

Information Element	Value/remark
Number of RRC Message Transmissions	Arbitrarily selected from 1 to 8

RRC STATUS

Information Element	Value/remark
Protocol Error Information	Checked to see if set to "Message Extension Not Comprehended"

RRC CONNECTION RELEASE (Step 4)

Information Element	Value/remark
Number of RRC Message Transmissions	Not Present

8.1.3.2.5 Test requirement

After step 2 the UE shall maintain the RRC connection and respond to the RRC CONNECTION RELEASE message by sending RRC STATUS message. This message shall specify the cause "Message Extension Not Comprehended" in the IE"Protocol Error Information".

After step4 the UE shall transmit an RRC CONNECTION RELEASE COMPLETE messages using acknowledged mode then it shall receive a response for this message from the SS-RLC.

After step5 the UE shall release its L2 signalling link and radio resources, then it shall go back to idle mode.

8.1.3.3 RRC Connection Release in CELL_FACH_state: Failure

8.1.3.3.1 Definition

8.1.3.3.2 Conformance requirement

In case of RRC connection release from CELL_FACH state, the RRC layer entity in the network issues an RRC CONNECTION RELEASE message using unacknowledged mode on the DCCH. When the UE does not succeed to transmit the RRC CONNECTION RELEASE COMPLETE message using acknowledged mode, it shall release all its radio resources, enter idle mode and the procedure ends on the UE side.

Reference

3GPP TS 25.331 clause 8.1.4

8.1.3.3.3 Test purpose

To confirm that the UE releases all its radio resources and enters idle mode when the UE does not succeed in transmitting the RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS.(i.e. the UE-RLC cannot receive acknowledgement for the transmission of the RRC CONNECTION RELEASE COMPLETE message from SS.).

8.1.3.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH state

Test Procedure

At the start of the test, the UE is brought to CELL_FACH state. When the RRC connection has been established, the SS transmits an RRC CONNECTION RELEASE message to the UE to disconnect the radio link. When the UE receives this message the UE transmits an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS. The SS ignores the message and does not transmit a STATUS PDU of RLC for this message. SS checks to see that UE continues to release all its radio resources and then enters idle mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought into CELL_FACH state by asking the operator to perform an outgoing call attempt. Clause
2		←	RRC CONNECTION RELEASE	SS ask to disconnect the radio link
3		→	RRC CONNECTION RELEASE COMPLETE	The UE transmits this message using acknowledged mode. The SS ignores this message and shall not transmit a STATUS PDU of RLC for this message.
4				SS checks to make sure that UE releases its all radio resources and enter idle mode.

Specific Message Contents

None

8.1.3.3.5 Test requirement

After step3 the UE shall release its L2 signalling link and radio resources then it shall go to idle mode.

--8.1.4 RRC Connection Re-Establishment

8.1.4.1 RRC Connection Re-Establishment : Success

8.1.4.1.1 Definition

8.1.4.1.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. After a successful cell re-selection and transiting to CELL_FACH state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to request for the re-establishment of an RRC connection. The UTRAN transmits an RRC CONNECTION RE-ESTABLISHMENT message on the downlink DCCH, which includes the new

configuration information. Then the UE transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.1.3 Test purpose

To confirm that the UE tries to find a new cell by transiting to CELL_FACH state, after detecting that a radio link failure has occurred. The UE shall then attempt to establish a new RRC connection using an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" . Finally when the SS allocates a new configuration to the UE using RRC CONNECTION ESTABLISHMENT message, the UE shall establish a new RRC connection link.

8.1.4.1.4 Method of test

Initial Condition

System Simulator : 2 cells• Cell 1 is active, Cell 2 is inactive•

UE: CELL_DCH state in cell 1

Test Procedure

The UE is brought to CELL_DCH state in a cell 1 after a successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving in a cell No.1 and begins to broadcast the BCCH in cell 2, the UE should detect a radio link failure in cell 1 and attempts to re-select to cell 2. It should then enter CELL_FACH state and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to SS. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes a new configuration information. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state in a cell 1, after making a successful outgoing call.
2		←	BCCH	The SS starts transmitting the BCCH in a cell 2 using the same contents (except for cell identity which is set to "0000 0000 0000 0010") for system information sent on cell 1. SS starts to listen to the uplink CCCH of cell 2.
3				The SS stops transmitting and receiving in a cell .1.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE should find a new cell 2 and then transmits this message which includes the IE"U-RNTI" assigned previously.
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new configuration information.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

Cell 1: SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	8 seconds
T313	15 seconds
T314	20 seconds
T315	30 seconds
N313	50

8.1.4.1.5 Test requirement

After step3, the UE shall detect the presence of cell 2 and attempts to re-established the lost RRC connection by transmitting RRC CONNECTION RE-ESTABLISHMENT REQUEST in the new cell. After step5, the UE shall re-establish an RRC connection and observe the new configuration information specified in an RRC CONNECTION RE-ESTABLISHMENT message.

8.1.4.2 RRC Connection Re-Establishment: Success after T301 timeout (T314 and T315 are running)

8.1.4.2.1 Definition

8.1.4.2.2 Conformance requirement

1. RRC connection re-establishment is needed when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. After a cell re-selection to a new cell, the UE transits to CELL_FACH state. In this state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to request the re-establishment of an RRC connection.
2. In the case of a failure to re-establish the RRC connection after the expiry of timer T301 ,the UE retries to re-establish the RRC connection. Finally when the UTRAN allocates a new configuration to the UE using RRC CONNECTION ESTABLISHMENT message, the UE shall establish a new RRC connection link.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.2.3 Test purpose

To confirm that the UE retries to re-establish a new RRC connection after the expiry of timer T301. This occurs after the UE loses the radio connection and starts to transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

8.1.4.2.4 Method of test

Initial Condition

System Simulator : 2 cells • Cell 1 is active, Cell .2 is inactive •

UE: CELL_DCH state in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1, after making a successful outgoing call attempt. ~~When the SS stops transmitting and receiving in a cell 1 and~~ begins to broadcast the BCCH in a cell 2 ~~and then stops transmitting and receiving in cell 1,-t.~~ The UE ~~shall~~ detects a radio link failure and the presence of cell 2. It then enters CELL_FACH state and transmits to SS an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH. The SS does not transmit an RRC CONNECTION RE-ESTABLISHMENT to answer to the request. This causes T301 timer to expire and the UE re-transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message again. Then the SS transmits an RRC CONNECTION RE-ESTABLISHMENT message and the UE reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS prompts the operator to make an outgoing call. The UE is in the CELL_DCH state in cell 1.
2		←	BCCH	The SS starts to transmit BCCH in a cell 2, with the SYSTEM INFORMATION message similar (with the exception of cell identity IE) to that transmitted in cell 1.
3				The SS stops transmitting and receiving in cell 1.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds cell 2 and transmits this message which includes the IE"U-RNTI".
5				The SS does not transmit a response.
6		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	After the expiry of T301 the UE re-transmits this message.
7		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new configuration information.
8		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.1.4.2.5 Test requirement

- After step3, the UE shall detect presence of cell 2 and starts to transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message to setup the radio link again.
- After step5, the UE shall re-transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message on the uplink CCCH after the expiry of timer T301.
- After step7 the UE shall re-establish an RRC connection in cell 2, using the new configuration commanded by the SS.

8.1.4.3 RRC Connection Re-Establishment: Success after reception of invalid message(V301 is not greater than N301)

8.1.4.3.1 Definition

8.1.4.3.2 Conformance requirement

1. RRC connection re-establishment is needed when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. After a cell re-selection to a new cell, the UE transits to CELL_FACH state. In this state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to request the re-establishment of an RRC connection.
2. In the case of a reception of an invalid RRC CONNECTION RE-ESTABLISHMENT message, the UE retries to re-establish the RRC connection until up to a maximum of N301 attempts after the expiry of timer T301.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.3.3 Test purpose

To confirm that the UE retries to re-establish a new RRC connection until its internal variable V301 is greater than N301 after the expiry of timer T301 when the UE receives an invalid RRC CONNECTION RE-ESTABLISHMENT message.

8.1.4.3.4 Method of test

Initial Condition

System Simulator : 2 cells • Cell 1 is active, Cell 2 is inactive •

UE: CELL_DCH state in cell 1

Test Procedure

Before the test starts, a SS internal counter K is initialized to 1. The UE is in the CELL_DCH state in cell 1, after making a successful outgoing call attempt. ~~When the SS stops transmitting and receiving in a cell 1 and begins to broadcast the BCCH in a cell 2 and then stops transmitting and receiving in cell 1.~~ The UE ~~shall~~ detects a radio link failure and the presence of cell 2. It then enters CELL_FACH state and transmits to SS an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message to answer to the request which includes the "DRX Indicator" IE set to "spare value". After T301 timer expires, the UE re-transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message again. When K is equal to N301-1 then the SS transmits an RRC CONNECTION RE-ESTABLISHMENT message and the UE reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS sets internal counter K to 1 and prompts the operator to make an outgoing call. The UE is in the CELL_DCH state in cell 1.
2		←	BCCH	The SS starts to transmit BCCH in a cell 2, with the SYSTEM INFORMATION message similar (with the exception of cell identity IE) to that transmitted in cell 1.
3				The SS stops transmitting and receiving in cell 1.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds cell 2 and transmits this message which includes the IE "U-RNTI".
5				If K is equal to N301-1 then next step is 7.
6		←	RRC CONNECTION RE-ESTABLISHMENT	The SS transmits a response which includes the "DRX Indicator" IE set to "spare value" but increments K and moves to step 4 to wait for another uplink message.
7		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new configuration information.
8		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.1.4.3.5 Test requirement

After step3, the UE shall detect presence of cell 2 and starts to transmit RRC CONNECTION RE-ESTABLISHMENT REQUEST message to setup the radio link again.

After step4, the UE shall re-transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message on the uplink CCCH after the expiry of timer T301. The total number of RRC CONNECTION RE-ESTABLISHMENT messages received by SS shall be equal to N301-1 at an time interval equivalent to T301 timer value.

After step7 the UE shall re-establish an RRC connection in cell 2, using the new configuration commanded by the SS.

8.1.4.4 RRC Connection Re-Establishment: Failure after reception of invalid message (V301 is greater than N301)

8.1.4.4.1 Definition

8.1.4.4.2 Conformance requirement

1. RRC connection re-establishment is needed when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. After cell re-selection and then transiting to CELL_FACH state, the UE RRC transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI" on the uplink CCCH to request for re-establishment of an RRC connection.
2. In the case of a reception of an invalid RRC CONNECTION RE-ESTABLISHMENT message, if the UE retries to re-establish the RRC connection until up to a maximum of N301 attempts after the expiry of timer T301 and receives the invalid message, the UE goes back to idle mode.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.4.3 Test purpose

To confirm that the UE stops retrying to re-establish the RRC connection if its internal counter V301 is greater than N301 and then goes back to idle state.

8.1.4.4.4 Method of test

Initial Condition

System Simulator : 2 cells • Cell 1 is active, Cell2 is inactive •

UE: CELL_DCH state in cell 1

Test Procedure

The UE is in the CELL_DCH state in a cell 1. When the SS stops transmitting and receiving in a cell 1 and begins to broadcast the BCCH in cell 2, and then stops transmitting and receiving in cell 1. The UE shall detect a radio link failure and the presence of cell 2. It then enters CELL_FACH state and transmits to SS an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message to answer to the request which includes the "DRX Indicator" IE set to "spare value", resulting in T301 timer to expire and the UE re-transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message again. The SS keeps a count of the number of RRC CONNECTION RE-ESTABLISHMENT REQUEST messages received. The UE goes back to idle mode after N301 transmission attempts.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS set counter K to 1. The UE is in CELL_DCH state in a cell 1 after establishing an outgoing call.
2		←	BCCH	The SS starts to transmit BCCH in a cell 2.
3				The SS stops transmitting and receiving in a cell 1.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds new cell 2 and transmits this message which includes the IE"U-RNTI".
5		←	RRC CONNECTION RE-ESTABLISHMENT	The SS transmits a response which includes the "DRX Indicator" IE set to "spare value" and increments K If K is greater than N301, then the next step is step 6 else go to step 4.
6				The UE goes back to idle mode.

Specific Message Contents

None

8.1.4.4.5 Test requirement

- After step3 the UE shall find the presence of cell 2, enters CELL_FACH state, and starts to transmit RRC CONNECTION RE-ESTABLISHMENT REQUEST message to setup the radio link again.
- After step5 the UE shall transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message on the uplink CCCH after the expiry of timer T301 until V301 is greater than N301. If V301 is greater than N301 then the UE shall go back to idle mode.

8.1.4.5 RRC Connection Re-Establishment: Failure (Release)

8.1.4.5.1 Definition

8.1.4.5.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. After the completion of cell re-selection and transiting to CELL_FACH state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to request for re-establishment of an RRC connection. The UTRAN transmits an RRC CONNECTION RELEASE message signifying that it is not able to accept the request, so the UE transmits an RRC CONNECTION RELEASE COMPLETE message to the UTRAN and goes back to idle mode.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.5.3 Test purpose

To confirm that the UE transmits an RRC CONNECTION RELEASE COMPLETE message and goes back to idle mode after its request to re-establish an RRC connection was rejected by the SS in the new cell. The request to re-establish should be made with an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI".

8.1.4.5.4

Method of test

Initial Condition

System Simulator : 2 cells • Cell 1 is active, Cell 2 is inactive •
 UE: CELL_DCH state in cell 1

Test Procedure

The UE starts from CELL_DCH state in cell 1 after making a successful outgoing call. When the SS stops transmitting and receiving in a cell 1 and begins to broadcast the BCCH in a cell 2, the UE finds a radio link failure and the presence of cell 2. It then enters CELL_FACH state and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE"U-RNTI" on the uplink CCCH. The SS replies with a RRC CONNECTION RELEASE message. After the UE receives an RRC CONNECTION RELEASE message, it transmits an RRC CONNECTION RELEASE COMPLETE message and goes back to idle mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in a cell 1 after completing a successful outgoing call setup.
2		←	BCCH	The SS transmits BCCH in a cell 2
3				The SS stops transmitting and receiving in cell 1.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds a new cell 2 and transmits this message which includes the IE"U-RNTI".
5		←	RRC CONNECTION RELEASE	SS rejects the re-establishment request.
6		→	RRC CONNECTION RELEASE COMPLETE	The UE goes back to idle mode.

Specific Message Contents

None

8.1.4.5.5

Test requirement

- After step3 the UE shall find a new cell 2 and transmits RRC CONNECTION RE-ESTABLISHMENT REQUEST to ask for re-connection of the radio link.
- After step5 the UE shall not transmit RRC CONNECTION RE-ESTABLISHMENT REQUEST message, instead it sends RRC CONNECTION RELEASE COMPLETE message and goes back to idle mode.

8.1.4.6

RRC Connection Re-Establishment: Failure(T315=0,T314=0)

8.1.4.6.1

Definition

8.1.4.6.2

Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. However the UE must enter to idle mode when T314 is set to 0 in RADIO BEARER SETUP message and also T315 is set to 0 in SYSTEM INFORMATION message.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.6.3

Test purpose

To confirm that the UE enters to idle mode, after detecting that a radio link failure has occurred.

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state, after successfully ~~outgoing call attempt~~ executing the mobile-terminated RRC connection establishment procedure as outlined in clause 7.1.2 in TS 34.108. The MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 2 messages on the downlink BCCH is modified with respect to the default setting. Next, SS transmits RADIO BEARER SETUP message on the downlink DCCH in order to establish radio bearers for user-data on DTCH. In this message, the re-establishment timers T314 and T315 are both set to 0. The UE shall respond by sending a RADIO BEARER SETUP COMPLETE message on the uplink DCCH. After the ~~call~~ DTCH has been established, the SS stops transmitting and receiving on the radio link except P-CCPCH, the UE should detect a radio link failure. Then the UE shall enter to idle mode as both T314 and T315 are set to 0. The SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is in idle state., the UE transmits an RRC CONNECTION REQUEST message on the uplink CCCH. SS replies with an RRC CONNECTION SETUP message and allocates dedicated channels to the UE. Then, the UE shall complete this test by transmitting RRC CONNECTION SETUP COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
<u>1</u>		←	<u>MASTER INFORMATION BLOCK</u> <u>SYSTEM INFORMATION BLOCK TYPE 2</u>	<u>T315=0</u>
<u>12</u>		←	RADIO -BEARER SETUP	T314=0
<u>23</u>		→	RADIO -BEARER SETUP COMPLETE	
<u>34</u>				The UE is brought to CELL_DCH state, after making a successful outgoing call.
<u>45</u>				The SS stops transmitting and receiving on the radio link except the PCCPCH.
<u>56</u>				The UE should enter to idle mode after it detects the radio link failure and SS confirms that the UE does not transmit any RRC CONNECTION RE-ESTABLISHMENT REQUEST messages for 20 seconds.
<u>67</u>		←	PAGING TYPE1	SS resumes transmission and reception on radio links suspended in step 4. SS pages the UE using a matched identity (test-SIM IMSI).
<u>78</u>		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause – must "Terminating Call" "Protocol Indicator" – must be FALSE
<u>89</u>		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.
<u>10</u>		→	<u>RRC CONNECTION SETUP COMPLETE</u>	<u>UE shall acknowledge the completion of RRC connection establishment procedure.</u>

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1)

Use the same message type in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
MIB Value Tag	<u>2</u>

SYSTEM INFORMATION BLOCK TYPE 2 (Step 1)

Use the same message type in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	20 seconds
T315	0 seconds
N313	50

RADIO BEARER SETUP (Step 2)

The contents of RADIO BEARER SETUP message in this test case is identical to message sub-type titled "The others of speech in CS" in Annex A, ~~those in default contents of layer 3 messages for RRC tests~~ with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information ~~to~~ <u>for</u> setup - RAB info - <u>RAB identity</u> - <u>CN Domain Identity</u> - <u>Re-establishment timer</u> - <u>CHOICE Timer value</u> - <u>T314 value</u>	<u>1</u> <u>One of the CN domains supported by the UE</u> <u>T314</u> 0

PAGING TYPE 1 (Step 7)

Information Element	Value/remark
Paging record list Paging record CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE Identity - IMSI	Only 1 entry CN originator Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified) Supported Domain (PS Domain or CS Domain) IMSI Set to the same octet string as in the IMSI stored in the USIM card

8.1.4.6.5 Test requirement

After step 4-5 the UE shall not transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step 8-9 the UE shall have an RRC connection based on dedicated physical channel resources. SS verifies that the UE transmits RRC CONNECTION SETUP COMPLETE on the uplink DCCH.

8.1.4.7 RRC Connection Re-Establishment: Success(T314=0, T315>0 and radio link failure)

8.1.4.7.1 Definition

8.1.4.7.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. But the UE must release the radio bearer which is associated with T314 if T314 is set to 0. After a successful cell re-selection and a subsequent transition to CELL_FACH state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to request for the re-establishment of an RRC connection. The UTRAN transmits an RRC CONNECTION RE-ESTABLISHMENT message on the downlink DCCH, which includes the new configuration information assigned. Then the UE transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.7.3 Test purpose

To confirm that the UE indicates to the non-access stratum the release of radio access bearer which is associated with T314 and try to find a new cell by transiting to CELL_FACH state, after detecting that a radio link failure has occurred. The UE shall then attempt to establish a new RRC connection using an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" . Finally when the UTRAN allocates a new configuration to the UE using RRC CONNECTION ESTABLISHMENT message,the UE shall establish a new RRC connection link.

8.1.4.7.4 Method of test

Initial Condition

System Simulator : 2 cells• Cell 1 is active, Cell 2 is inactive•

UE: CELL_DCH state in cell 1, after executing a generic call set-up procedure for mobile originating CS or PS call (clauses 7.2.3.2 and 7.2.4.2 in TS 34.108). The exact procedure to apply depends on the CN domain(s) supported by the UE.

Test Procedure

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving in a cell No.1 and begins to broadcast the BCCH in cell 2, and then stops transmitting and receiving in cell 1. The UE should detect a radio link failure in cell 1 and indicate to the non-access stratum the release of the radio bearer which is associated with T314. It shall attempt to re-select to cell 2. It should then enter CELL_FACH state and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to SS. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes a new configuration. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T314=0
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state in a cell 1, after making a successful outgoing call.
4		←	BCCH	The SS starts transmitting the BCCH in a cell 2 using the same contents (except for cell identity which is set to "0000 0000 0000 0010") for system information sent on cell 1. SS starts to listen to the uplink CCCH of cell 2.
5				The SS stops transmitting and receiving in a cell .1.
6				The UE detects the radio link failure which is associated with T314. The UE indicates to the non-access stratum the release of the affected radio bearer .
7		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE should find a new cell 2 and then transmits this message which includes the IE"U-RNTI" assigned previously.
8		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new configuration information.
9		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information to setup - RAB info - T314	0

8.1.4.7.5 Test requirement

After step5, the UE shall indicate to the non-access stratum the release of the radio bearer which is associated with T314. SS checks that no further data transmission from the affected radio bearer is received from the UE.

After step6, the UE shall detect the presence of cell 2 and attempts to re-established the lost RRC connection by transmitting RRC CONNECTION RE-ESTABLISHMENT REQUEST in the new cell. After step8, the UE shall re-establish an RRC connection .

8.1.4.8 RRC Connection Re-Establishment: Success(T314>0, T315=0 and radio link failure)

8.1.4.8.1 Definition

8.1.4.8.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. But the UE must release the radio bearer which is associated with T315 if T315 is set to 0. After a successful cell re-selection and subsequent transition to CELL_FACH state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to request for the re-establishment of an RRC connection. The UTRAN transmits an RRC CONNECTION RE-ESTABLISHMENT message on the downlink DCCH, which includes the new configuration information assigned. Then the UE transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.8.3 Test purpose

To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T315 and try to find a new cell by transiting to CELL_FACH state, after detecting that a radio link failure has occurred. The UE shall then attempt to establish a new RRC connection using an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" . Finally when the SS allocates a new configuration to the UE using RRC CONNECTION ESTABLISHMENT message, the UE shall establish a new RRC connection link.

8.1.4.8.4 Method of test

Initial Condition

System Simulator : 2 cells • Cell 1 is active, Cell 2 is inactive •

UE: CELL_DCH state in cell 1, after executing a generic call set-up procedure for mobile originating CS or PS call (clauses 7.2.3.2 and 7.2.4.2 in TS 34.108). The exact procedure to apply depends on the CN domain(s) supported by the UE.

Test Procedure

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving in a cell No.1 and begins to broadcast the BCCH in cell 2, and then stops transmitting and receiving in cell 1. The UE should detect a radio link failure in cell 1 and indicate to the non-access stratum the release of the radio bearer which is associated with T315, and then it shall attempt to re-select to cell 2. After that, it should then enter CELL_FACH state and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to SS. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes a new configuration information. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T315=0
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state in a cell 1, after making a successful outgoing call.
4		←	BCCH	The SS starts transmitting the BCCH in a cell 2 using the same contents (except for cell identity which is set to "0000 0000 0000 0010") for system information sent on cell 1. SS starts to listen to the uplink CCCH of cell 2.
5				The SS stops transmitting and receiving in a cell .1.
6				The UE detects the radio link failure which is associated with T315. The UE indicates to the non-access stratum the release of the radio bearer .
7		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE should find a new cell 2 and then transmits this message which includes the IE"U-RNTI" assigned previously.
8		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new configuration information channel.
9		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information to setup - RAB info - T314	0

8.1.4.8.5 Test requirement

After step5, the UE shall indicate to the non-access stratum the release of the radio bearer which is associated with T314.

After step6, the UE shall detect the presence of cell 2 and attempts to re-established the lost RRC connection by transmitting RRC CONNECTION RE-ESTABLISHMENT REQUEST to the new cell.

After step8, the UE shall re-establish an RRC connection.

8.1.4.9 RRC Connection Re-Establishment: Failure(T314 is timeout and T315=0)

8.1.4.9.1

Definition

8.1.4.9.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. When the UE shall not find a new cell until T314 is timeout The UE must enter to idle mode .

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.9.3 Test purpose

To confirm that the UE enters to idle mode, after T314 is timeout.

8.1.4.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state, after executing a generic call set-up procedure for mobile originating CS or PS call (clauses 7.2.3.2 and 7.2.4.2 in TS 34.108). The exact procedure to apply depends on the CN domain(s) supported by the UE.

Test Procedure

The UE is brought to CELL_DCH state after a successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving on the radio link except PCCPCH, the UE should detect a radio link failure . Until T314 is timeout the UE shall continue to find a new cell and SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is not in idle state by no response before T314 is timeout After T314 is timeout then the UE shall enter to idle mode The SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is in idle state., the UE transmits an RRC CONNECTION REQUEST message on the uplink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T314=20 seconds
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state, after making a successful outgoing call.
4				The SS stops transmitting and receiving on the radio link except •for the PCCPCH.
5		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI) before T314 is timeout.
6				The SS confirms that the UE does not transmit a response for 20 seconds.
7		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI).
8		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause – must "Terminating Call" "Protocol Indicator" – must be FALSE
9		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.
10		→	RRC CONNECTION SETUP COMPLETE	UE shall acknowledge the completion of RRC connection establishment procedure.

Specific Message Contents

SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	20 seconds
T315	0 seconds
N313	50

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Re-establishment timer - T314	20 seconds

PAGING TYPE 1

Information Element	Value/remark
Paging record list Paging record CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE Identity - IMSI	Only 1 entry CN originator Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified) Supported Domain (PS Domain or CS Domain) IMSI Set to the same octet string as in the IMSI stored in the USIM card

8.1.4.9.5 Test requirement

After step 5 the UE shall not transmits an RRC CONNECTION REQUEST message.

After step 9 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.4.10 RRC Connection Re-Establishment: Failure(T315 is timeout and T314=0)

8.1.4.10.1 Definition

8.1.4.10.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. When the UE shall not find a new cell until T315 is timeout The UE must enter to idle mode .

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.10.3 Test purpose

To confirm that the UE enters to idle mode, after T315 is timeout.

8.1.4.10.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state, after executing a generic call set-up procedure for mobile originating CS or PS call (clauses 7.2.3.2 and 7.2.4.2 in TS 34.108). The exact procedure to apply depends on the CN domain(s) supported by the UE.

Test Procedure

The UE is brought to CELL_DCH state after a successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving on the radio link except PCCPCH, the UE should detect a radio link failure . Until T315 is timeout the UE shall continue to find a new cell and SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is not in idle state by no response before T315 is timeout After T315 is timeout then the UE shall enter to idle mode The SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is in idle state., the UE transmits an RRC CONNECTION REQUEST message on the uplink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T315=30 seconds
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state, after making a successful outgoing call.
4				The SS stops transmitting and receiving on the radio link except the PCCPCH.
5		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI) before T315 is timeout.
6				The SS confirms that the UE does not transmit a response for 30 seconds.
7		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI).
8		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause – must "Terminating Call" "Protocol Indicator" – must be FALSE
9		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.
10		→	RRC CONNECTION SETUP COMPLETE	UE shall acknowledge the completion of RRC connection establishment procedure.

Specific Message Contents

SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	0 seconds
T315	30 seconds
N313	50

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Re-establishment timer - T315	30 seconds

PAGING TYPE 1

Information Element	Value/remark
Paging record list Paging record CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE Identity - IMSI	Only 1 entry CN originator Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified) Supported Domain (PS Domain or CS Domain) IMSI Set to the same octet string as in the IMSI stored in the USIM card

8.1.4.10.5 Test requirement

After step 5 the UE shall not transmits an RRC CONNECTION REQUEST message.

After step 9 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.4.11 RRC Connection Re-Establishment: Success(Unrecoverable error in RLC)

8.1.4.11.1 Definition

8.1.4.11.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. detection of RLC unrecoverable error (amount of the retransmission of RESET_PDU reaches the value of Max_DAT and receives no ACK) in CELL_DCH state. After a successful cell re-selection and transition to CELL_FACH state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to request for the re-establishment of an RRC connection. The UTRAN transmits an RRC CONNECTION RE-ESTABLISHMENT message on the downlink DCCH, which includes the new configuration information assigned. Then the UE transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.11.3 Test purpose

To confirm that the UE tries to find a new cell by transiting to CELL_FACH state, after detecting that a RLC unrecoverable error has occurred. The UE shall then attempt to establish a new RRC connection using an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" . Finally when the SS allocates a new configuration to the UE using RRC CONNECTION ESTABLISHMENT message, the UE shall establish a new RRC connection link.

8.1.4.11.4 Method of test

Initial Condition

System Simulator : 2 cells • Cell 1 is active, Cell 2 is inactive •

UE: CELL_DCH state in cell 1

Test Procedure

The UE is brought to CELL_DCH state in a cell 1 after a successful outgoing call attempt. After the call has been established, the SS transmits a PAGING TYPE2 message on the downlink DCCH. Then the UE transmits an UPLINK DIRECT TRANSFER message on the uplink using AM-RLC for the response and the SS does not transmit a STATUS PDU for the response to AM-RLC PDU. and begins to broadcast the BCCH in cell 2. The UE should detect an unrecoverable error in cell 1 and attempts to re-select to cell 2. It should then enter CELL_FACH state and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH to SS. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes "TRUE" in RLC reset indicator(for C-plane) IE and a new TFCS setting according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the RLC and the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state in a cell 1, after making a successful outgoing call.
2		←	PAGING TYPE2	The SS transmits a PAGING TYPE 2 message to the UE on the ~~up~~ downlink DCCH in a-cell -1.
3		→	UPLINK DIRECT TRANSFER	The UE responds to the PAGING TYPE 2 message using AM-RLC but the SS does not transmit a STATUS PDU as an acknowledgement.
4		←	BCCH	The SS starts transmitting the BCCH in a cell 2 using the same contents (except for cell identity which is set to "0000 0000 0000 0010") for system information sent on cell 1. SS starts to listen to the uplink CCCH of cell 2.
5				The UE detects an unrecoverable error in the RLC level.
6		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE should find a new cell 2 and then transmits this message which includes the IE"U-RNTI" assigned previously.
7		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new configuration information.
8		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

Cell 1: SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	8 seconds
T313	15 seconds
T314	30 seconds
T315	30 seconds
N313	16

8.1.4.11.5 Test requirement

After step5, the UE shall detect the presence of cell 2 and attempt to re-established the RRC connection by transmitting RRC CONNECTION RE-ESTABLISHMENT REQUEST in the new cell.
After step7, the UE shall re-establish an RRC connection.

8.1.5 UE capability

8.1.5.1 UE Capability: Success

8.1.5.1.1 Definition

8.1.5.1.2

Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network that is supported by the UE if the UTRAN needs an update of the UE's UMTS capability information or of its inter-system classmark.
2. When the UE receives a UE CAPABILITY ENQUIRY message, the UE transmits a UE CAPABILITY INFORMATION message on the uplink DCCH. Then the UTRAN transmits a UE CAPABILITY INFORMATION CONFIRM message.
3. If during the execution of UE capability update procedure, an invalid UE CAPABILITY INFORMATION CONFIRM is received, the UE shall respond with RRC STATUS message and decide whether to re-transmit UE CAPABILITY INFORMATION message by comparing its internal counter against N304.

Reference

3GPP TS 25.331 clause 8.1.6, 8.1.7

8.1.5.1.3

Test purpose

To confirm that the UE transmits a UE CAPABILITY INFORMATION message after it receives a UE CAPABILITY ENQUIRY message from the SS. To confirm that the UE indicate an invalid message reception when erroneous downlink UE CAPABILITY ENQUIRY and UE CAPABILITY INFORMATION CONFIRM messages are received. The UE shall transmit RRC STATUS message with the correct error cause value to SS.

8.1.5.1.4

Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. The SS transmits an erroneous UE CAPABILITY ENQUIRY message containing spare value in the IE "Capability update requirement". After receiving such a message, the UE should report the error using RRC STATUS message with the appropriate error cause specified. Then SS transmits a UE CAPABILITY ENQUIRY message which includes the IE "Capability update requirement", the UE receives this message and transmits a UE CAPABILITY INFORMATION message on the uplink DCCH which includes the "Inter-system message" IE. The SS transmits a UE CAPABILITY INFORMATION CONFIRM message to the UE to complete the test. Then SS initiates another UE capability update procedure by transmitting the same UE CAPABILITY ENQUIRY using as in step 4. The UE shall reply with a UE CAPABILITY INFORMATION message on the uplink DCCH. When SS receives this message, it transmit an erroneous UE CAPABILITY INFORMATION CONFIRM message. The content of this message is a concatenation of the message type IE and an arbitrary 32-bits string. The UE shall detect a protocol error and send RRC STATUS message to report this event. After receiving RLC acknowledgement for this message, the UE shall re-transmit UE CAPABILITY INFORMATION message on the uplink DCCH. SS completes this test by an error-free UE CAPABILITY INFORMATION CONFIRM message similar to the message sent in step 6.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state after an outgoing call has been established successfully.
2		←	UE CAPABILITY ENQUIRY	See specific message contents for this message
3		→	RRC STATUS	The IE "Protocol error cause" found in IE "Protocol error information" should be set to "Information element value not comprehended"
4		←	UE CAPABILITY ENQUIRY	Use default message.
5		→	UE CAPABILITY INFORMATION	The message shall include the IE "Inter-system message", which carries the GSM classmark information requested.
6		←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
7		←	UE CAPABILITY ENQUIRY	Same as in step 4.
8		→	UE CAPABILITY INFORMATION	Shall be the same message content as in step 5.
9		←	UE CAPABILITY INFORMATION CONFIRM	This message contains an arbitrary 32-bits patterns, following the IE "Message Type"
10		→	RRC STATUS	UE shall detect an error and then transmit this message.
11		→	UE CAPABILITY INFORMATION	UE shall re-transmit this message after receiving acknowledgement from the SS for RRC STATUS message.
12		←	UE CAPABILITY INFORMATION CONFIRM	SS sends an error-free message to acknowledge the receipt of the uplink message.

Specific Message Contents

UE CAPABILITY ENQUIRY (Step 2 and 7)

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement - System specific capability update requirement list - System specific capability update requirement	TRUE Contains a spare value in this IE

RRC STATUS (Step 3)

Information Element	Value/remark
Protocol Error Information - Protocol Error Cause	Checked to see if set to "Information element not comprehended"

UE CAPABILITY INFORMATION CONFIRM (Step 9)

Information Element	Value/remark
Unknown bit pattern	An arbitrary 32 bits

RRC STATUS (Step 3)

Information Element	Value/remark
Protocol Error Information - Protocol Error Cause	Checked to see if set to "ASN.1 violation or encoding" or "conditional information element error"

8.1.5.1.5 Test requirement

After step 2, the UE shall transmit a RRC STATUS message on the uplink DCCH, reporting the error with protocol error cause set to "Information element value not comprehended".

After step 4 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH to respond to the UE CAPABILITY ENQUIRY message.

After step 9, the UE shall transmit a RRC STATUS message on the uplink DCCH. The protocol error cause shall be set to "ASN.1 violation or encoding" or "conditional information element error".

After step 10, the UE shall re-transmit the UE CAPABILITY INFORMATION message with a similar content as in step 8.

8.1.5.2 UE Capability: Success after T304 timeout

8.1.5.2.1 Definition

8.1.5.2.2 Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network that is supported by the UE, if the UTRAN needs an update of the UE's UMTS capability information or of its inter-system classmark.
2. After the UE receives a UE CAPABILITY ENQUIRY message, it transmits a UE CAPABILITY INFORMATION message on the uplink DCCH. If it fails to receive a UE CAPABILITY INFORMATION CONFIRM message, the UE re-transmits another UE CAPABILITY INFORMATION message until V304 is greater than N304.

Reference

3GPP TS 25.331 clause 8.1.6, 7

8.1.5.2.3 Test purpose

To confirm that the UE re- transmits a UE CAPABILITY INFORMATION message until V304 is greater than N304, after the expiry of timer T304 when the UE cannot receive a UE CAPABILITY INFORMATION CONFIRM message in response to a UE CAPABILITY INFORMATION message.

8.1.5.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state. When the SS transmits a UE CAPABILITY ENQUIRY message which includes the "Capability update requirement" IE, the UE shall reply with a UE CAPABILITY INFORMATION message on the uplink DCCH which includes the "Inter-system message" IE. The SS does not transmit a UE CAPABILITY INFORMATION CONFIRM message to the UE, resulting in the T304 timer to expire. SS shall observe that the UE attempts to transmit a UE CAPABILITY INFORMATION message again. The UE shall re-transmit N304 times, and SS transmits a UE CAPABILITY INFORMATION CONFIRM message to answer the last request and completes this test procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state. SS sets internal counter K =1
2		←	UE CAPABILITY ENQUIRY	Including the "Capability update requirement"IE.
3		→	UE CAPABILITY INFORMATION	Including the "Inter-system message"IE, which indicated the radio access network supported by the UE.
4				If K is greater to N304, then proceed to step 6.
5				The SS does not transmit a response and wait for T304 timer to expire. K=K+1 and goes to step 3.
6		←	UE CAPABILITY INFORMATION CONFIRM	Use default message contents

Specific Message Contents

None

8.1.5.2.5 Test requirement

After step3 the UE shall re- transmits a UE CAPABILITY INFORMATION message on the uplink DCCH, after each expiry of timer T304. The UE CAPABILITY INFORMATION message shall contain IE" UE radio access capability" indicating the settings found in PIC/PIXIT statements. IE"UE system specific capability" shall carry relevant GSM classmark information. After (N304+1) re-transmissions, the UE shall receive a UE CAPABILITY INFORMATION CONFIRM message.

8.1.5.3 UE Capability: Failure (After N304 re-transmissions)

8.1.5.3.1 Definition

8.1.5.3.2 Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network that is supported by the UE if the UTRAN needs an update of the UE's UMTS capability information or of its inter-system classmark.
2. In the case of a failure to transmit a UE CAPABILITY INFORMATION in excess of N304 times, the UE initiates the RRC connection re-establishment procedure.

Reference

3GPP TS 25.331 clause 8.1.6, 8.1.7

8.1.5.3.3 Test purpose

To confirm that the UE stops retrying to transmit a UE CAPABILITY INFORMATION message if V304 is greater than N304. It then initiates the RRC re-establishment procedure.

8.1.5.3.4 Method of test

Initial Condition

System Simulator : 1 cell
UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state. When the SS transmits a UE CAPABILITY ENQUIRY message which includes the "Capability update requirement" IE, the UE receives this message and transmits a UE CAPABILITY INFORMATION message on the uplink DCCH which includes the "Inter-system message" IE. The SS does not respond with a UE CAPABILITY INFORMATION CONFIRM message but keeps a count on the number of messages received. When the T304 timer expires, the UE shall transmit a UE CAPABILITY INFORMATION message again. After sending (N304+1) messages, the UE shall stop sending UE CAPABILITY INFORMATION messages and initiates the RRC connection re-establishment procedure. This is verified in SS by the reception of RRC CONNECTION RE-ESTABLISHMENT REQUEST. SS allows UE to return to connected state by issuing RRC CONNECTION RE-ESTABLISHMENT message on the downlink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE starts from CELL_DCH state. SS sets counter K to 1
2		←	UE CAPABILITY ENQUIRY	Including the "Capability update requirement" IE.
3		→	UE CAPABILITY INFORMATION	Including the "Inter-system message" IE.
4				The SS does not transmit a response and allows T304 timer to expire. SS increments counter K. If K is greater than N304, proceeds to step 5 else returns to 3.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE assumes that radio link failure has occurred and transmits this message which includes the IE "U-RNTI" containing the U-RNTI allocated to the UE earlier.
6		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.1.5.3.5 Test requirement

After step3 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH. The UE shall re-transmit this message for N304 times. Thereafter, the UE shall initiate the RRC re-establishment procedure by sending the message RRC CONNECTION RE-ESTABLISHMENT REQUEST. After step7 the UE shall have a new RRC connection, using the new transport format dictated in the RRC CONNECTION RE-ESTABLISHMENT message.

8.1.6 Direct Transfer

8.1.6.1 Direct Transfer in CELL DCH state (invalid message reception)

8.1.6.1.1 Definition

8.1.6.1.2 Conformance requirement

The UE shall transmit an RRC STATUS message stating the reason “protocol error” in IE” failure cause” and also set value “Information element value not comprehended” in IE” Protocol error cause “ when the UE receives a DOWNLINK DIRECT TRANSFER message, which includes a spare value for the mandatory IE” CN domain identity” having criticality defined as “Reject”.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.6.1.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message specifying a spare value in the mandatory IE” CN domain identity”

8.1.6.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a DOWNLINK DIRECT TRANSFER message to the UE and includes the spare value in the mandatory IE” CN domain identity”. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC, setting the value “protocol error” in IE” failure cause”. The error type “Information element value not comprehended” shall also be indicated in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	DOWNLINK DIRECT TRANSFER	
2		→	RRC STATUS	

Specific Message Contents

DOWNLINK DIRECT TRANSFER

The contents of DOWNLINK DIRECT TRANSFER message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:.

Information Element	Value/remark
CN domain identity	Spare value

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Information element value not comprehended
Other information element	Not checked

8.1.6.1.5 Test requirement

After step1 the UE shall transmit a n RRC STATUS message on the DCCH using AM RLC setting “protocol error” in IE” failure cause” and setting “Information element value not comprehended” in IE” Protocol error cause”.

8.1.6.2 Direct Transfer in CELL FACH state(invalid message reception)

8.1.6.2.1 Definition

8.1.6.2.2 Conformance requirement

The UE shall transmit an RRC STATUS message stating the reason “protocol error” in IE” failure cause” and also set value “Information element value not comprehended” in IE” Protocol error cause “ when the UE receives a DOWNLINK DIRECT TRANSFER message, which includes a spare value for the mandatory IE” CN domain identity” having criticality defined as “Reject”.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.6.2.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message specifying a spare value in the mandatory IE" CN domain identity"

8.1.6.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a DOWNLINK DIRECT TRANSFER message to the UE and includes the spare value in the mandatory IE" CN domain identity". The UE shall transmit an RRC STATUS message on the DCCH using AM RLC, setting the value "protocol error" in IE" failure cause". The error type "Information element value not comprehended" shall also be indicated in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	DOWNLINK DIRECT TRANSFER	
2		→	RRC STATUS	

Specific Message Contents

DOWNLINK DIRECT TRANSFER

The contents of DOWNLINK DIRECT TRANSFER message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:.

Information Element	Value/remark
CN domain identity	Spare value

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Information element value not comprehended
Other information element	Not checked

8.1.6.2.5 Test requirement

After step1 the UE shall transmit a n RRC STATUS message on the DCCH using AM RLC setting "protocol error" in IE" failure cause" and setting "Information element value not comprehended" in IE" Protocol error cause".

8.1.7 Security mode control

8.1.7.1 Definition

8.1.7.2 Conformance requirement

1. This procedure is used to trigger the start of ciphering or to commands the change of the cipher key, both for the signalling link and for a user plane connection. The ciphering is configured in both directions.
2. The SRNC transmits a SECURITY MODE CONTROL COMMAND to the UE, which indicates the uplink Activation Time when the ciphering shall start to be applied in uplink. The SRNC starts to decipher in the new ciphering configuration at the uplink Activation Time.
3. When the UE receives the SECURITY MODE CONTROL COMMAND, it starts ciphering transmission in the uplink in the new configuration at the uplink Activation Time. It transmits a SECURITY MODE CONTROL COMPLETE message, which includes a downlink Activation Time, and starts to receive

in the new ciphering configuration at that Activation Time. When the SRNC receives the SECURITY MODE CONTROL COMPLETE, it starts ciphering transmission in the new configuration at the downlink Activation Time.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.7.3 Test purpose

To confirm that the UE correctly communicates to the SS using each ciphering functions after each Activation Time when the UE receives a SECURITY MODE CONTROL COMMAND which includes the uplink Activation Time and transmits a SECURITY MODE CONTROL COMPLETE which includes the downlink Activation Time.

8.1.7.4 Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_DCH

Test Procedure

The UE is in the RRC connected state on the DCCH. The SS transmits a SECURITY MODE CONTROL COMMAND message which includes the uplink Activation Time. Then the UE start to cipher in uplink after the Activation Time and transmits a SECURITY MODE CONTROL COMPLETE message which includes the downlink Activation Time. The UE starts to cipher in downlink after the Activation Time. Finally the UE correctly communicates using each ciphering functions.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on DCCH
2		←	SECURITY MODE CONTROL COMMAND	IE "Ciphering Algorithm" is set to a spare value
3		→	SECURITY MODE FAILURE	IE "Failure Cause" should be set to "Protocol Error" and IE "Protocol Error Information" should be set to "Information element value not comprehended".
4		←	SECURITY MODE CONTROL COMMAND	See specific message contents. For uplink transmissions, new ciphering configuration should be active after 255 frames from current CFN. SS checks to see
5		→	SECURITY MODE CONTROL COMPLETE	After the downlink Activation Time the downlink ciphering function is active. SS starts to
4				Both Ciphering functions ~~is~~ <u>are</u> active so the communication is done correctly.

Specific Message Contents

SECURITY MODE COMMAND (Step 2)

Information Element	Value/remark
Ciphering algorithm	1 of the 15 spare values

SECURITY MODE COMMAND (Step 4)

Information Element	Value/remark
Ciphering mode command	Start
Ciphering algorithm	Standard UMTS Encryption Algorithm UEA1
Ciphering algorithm	
Activation time for DPCH	Current CFN-[current CFN mod 8 + 8]
Activation time	
Radio bearer downlink ciphering activation time info	
Radio bearer activation time	2 RBs
RB identity ₁	2
RLC sequence number ₁	Current downlink RLC Sequence Number for RB3
RB identity ₂	3
RLC sequence number ₂	Current downlink RLC Sequence Number for RB4

8.1.7.5 Test requirement

After step2 the UE shall transmit a SECURITY MODE FAILURE message to report protocol error detected in the earlier SECURITY MODE CONTROL COMMAND message. The UE shall be able to communicate normally with all data unciphered. After step 4 the UE shall RLC-acknowledge the receipt of the SECURITY MODE CONTROL COMMAND message using unciphered mode. The SECURITY MODE CONTROL COMPLETE message

8.2 Radio Bearer control procedure

8.2.1 Radio Bearer Establishment

8.2.1.1 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success(Data integrity protection algorithm is not applied)

8.2.1.1.1 Definition

8.2.1.1.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

(This is the case where data integrity protection algorithm is not applied.)

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.1.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state, after the test operator is prompted to make an out-going call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1 including the start of tx/rx. This message requests the establishment of RABs for carrying the traffic of the speech call. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message do not contain IE "integrity check info" and "integrity protection mode info"
2		→	RADIO BEARER SETUP COMPLETE	This message do not contain "integrity check info" and "Uplink integrity activation info"
3				To confirm the communication.

Specific Message Contents

For RADIO BEARER SETUP in step 1, using the message sub-type indicated as "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in default message content clause.

8.2.1.1.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation.

8.2.1.2 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success(Effectuated Data integrity protection algorithm)

8.2.1.2.1 Definition

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8.2.1.2.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message, which applies data integrity function, and then communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1, 8.5.11.

8.2.1.2.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message which contains IE"Integrity check info" and IE"Integrity protection mode info" received from the SS.

8.2.1.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH and data integrity algorithm is not applied

Test Procedure

The UE is in the CELL_DCH state, after the test operator is prompted to make an out-going data call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message which is including IE"integrity check info" and "integrity protection mode info" to the UE after it sets up L1 including the start of tx/rx. This message requests the establishment of RABs for carrying the traffic of the call. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message which is including IE"integrity check info" using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message contain IE "integrity check info" and "integrity protection mode info"
2		→	RADIO BEARER SETUP COMPLETE	This message contain "integrity check info"
3				To confirm the communication.

Specific Message Contents

For RADIO BEARER SETUP in step 1, using the message sub-types indicated as "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in default message content clause.

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to identical message sub-type found in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
Integrity check info	Bit string (32) MAC-I See TS33.102
- Message authentication code	0
- RRC Message sequence number	Present
Integrity protection mode info	"Start"
- Integrity protection mode command	Not present (It is needed only when the IE"Integrity protection mode command" has the value "modify" .)
- Downlink integrity protection activation info	UMTS Integrity Algorithm UIA1
- integrity protection algorithm	Bit string (32) FRESH See TS33.102
- integrity protection initialisation number	

RADIO BEARER SETUP COMPLETE

Information Element	Value/remark
Integrity check info	Not checked(MAC-I See TS33.102)
- Message authentication code	Not checked
- RRC Message sequence number	Not checked
Uplink Integrity protection activation info	Not checked

8.2.1.2.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation. This can be verified by the correct reproduction of the u-plane data transmitted and received between the test operator and SS.

8.2.1.3 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.1.3.1 Definition

8.2.1.3.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message which includes unsupported configuration parameters and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.3.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of receiving a RADIO BEARER SETUP message which includes parameters of its unsupported configuration.

8.2.1.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message as the frequency cannot be supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	16383. Not Present.

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.1.3.5 Test requirement

- After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

8.2.1.4 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.4.1 Definition

8.2.2.1.4.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to configure the new radio bearer by the T312 expiry and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.4.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message when the UE fails to configure the new radio bearer following detection of physical channel failure after T312 expiry.

8.2.1.4.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message to the UE and does not configure the new radio bearer. Then after T312 expiry, the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	The SS does not configure the new radio bearer stated in the message.
2				The UE does not configure the new radio bearer and reverts to the old configuration.
3		→	RADIO BEARER SETUP FAILURE	UE shall transmit this message using the old RRC signalling bearer operating in RLC-AM mode.

Specific Message Contents

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.1.4.5 Test requirement

- After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

8.2.1.5 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and reversion failure)

8.2.1.5.1 Definition

8.2.1.5.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer establishment procedure.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.5.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot establish the new radio bearer for the L1 configuration and cannot revert to the old configuration.

8.2.1.5.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell No.1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2, with a power level suitable for camping but lower than that of cell 1. Next, SS transmits a RADIO BEARER SETUP message to the UE. As the SS does not configure the new radio bearer and deletes the old configuration the UE fails to configure L1 and fails to revert to the old configuration. Then the UE shall find cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the

IE"U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS transmits a BCCH in cell 2 but with a lower power level than in cell 1.
2		←	RADIO BEARER SETUP	The SS does not configure the new radio bearer and delete the old configuration.
3				The UE shall detect a failure to configure the new radio bearers and also subsequently, cannot revert to old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall detect the presence of cell.2and transmits this message which includes the IE"U-RNTI" it has been assigned to.
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.1.5.5 Test requirement

After step3 the UE shall find a new cell 2, enter CELL_FACH state, and transmit RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step6 the UE shall re-establish an RRC connection in cell 2.

8.2.1.6 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.6.1 Definition

8.2.1.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message and the UE shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.6.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message.

8.2.1.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER SETUP message to the UE before the UE configures the radio bearer the UE keeps the old configuration and transmits an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including IE"Uplink DPCH info"
2		←	RADIO BEARER SETUP	SS send this message before the expiry of activation time specified in RADIO BEARER SETUP message of step 1.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

For RADIO BEARER SETUP in step 1 ~~and step 2~~, use the message sub-type indicated as "Speech in CS" or "[Packet to CELL_DCH from CELL_DCH in PS](#)" found in [default message content clause Annex A](#), with the exception of the following Information Elements:

RADIO BEARER SETUP (Step 1)

Information Element	Value/remark
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256

RADIO BEARER SETUP (Step 2)

[For RADIO BEARER SETUP in step 2, use the message sub-type indicated as "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A, with the exception of the following Information Elements:](#)

Information Element	Value/remark
Activation Time	Not Present

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.1.6.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.1.7 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception)

8.2.1.7.1 Definition

8.2.1.7.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" and criticality is defined as "Reject". Then it transmits a RADIO BEARER SETUP FAILURE message which is set to "protocol error" in IE" failure cause" and is set to "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.7.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message which indicates the spare value in the mandatory IE" DRX indicator" whose criticality is defined as "Reject".

8.2.1.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message to the UE which indicates a spare value in the mandatory IE "DRX indicator" whose criticality is defined as "Reject". The UE keeps the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE "failure cause", and is set to "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to that of default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.7.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE "failure cause" and set to "Information element value not comprehended" in IE "Protocol error cause".

8.2.1.8 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Success

8.2.1.8.1 Definition

8.2.1.8.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.8.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state, after the test operator is asked to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	SS requests test operator to make an outgoing packet-switched data call.
2		→	RADIO BEARER SETUP COMPLETE	
3				To confirm the communication between UE and SS, based on the exchange of packets.

Specific Message Contents

For RADIO BEARER SETUP message in step 1, use the message sub-type indicated as “Packet to CELL_DCH from CELL_FACH in PS” found in default message content clause.

8.2.1.8.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation.

8.2.1.9 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Unsupported configuration)

8.2.1.9.1 Definition

8.2.1.9.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which indicates an unsupported configuration parameters and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.9.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of receiving a RADIO BEARER SETUP message which includes parameters of unsupported configuration.

8.2.1.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message specifying a frequency that cannot be supported by the UE. After the UE receives this message, it transmits a RADIO

BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to that of default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	16384. Not present

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.1.9.5 Test requirement

After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting value “configuration unacceptable” in IE” failure cause”.

8.2.1.10 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Physical channel Failure)

8.2.1.10.1 Definition

8.2.1.10.2 Conformance requirement

The UE shall initiate the cell update procedure when the UE failed to access the assigned physical channel according to a RADIO BEARER SETUP message when transiting from CELL_DCH state to CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.10.3 Test purpose

To confirm that the UE perform a cell update procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER SETUP message as it transits from CELL_DCH to CELL_FACH.

8.2.1.10.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and transmits a RADIO BEARER SETUP message as the transition occurs from CELL_DCH to CELL_FACH. The UE cannot access the assigned physical channel, as the SS does not transmit any data on the downlink common channel in cell 1. Then the UE shall initiate the cell update procedure in cell 2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
<u>1</u>		←	BCCH	The SS broadcasts BCCH in cell No. 2.
<u>2</u>		←	RADIO BEARER SETUP	Assigned the transition from CELL_DCH to CELL_FACH
<u>3</u>			BCCH	The SS broadcasts BCCH in cell No. 2.
3				The UE cannot use the assigned the physical channel.
4		→	CELL UPDATE	The UE finds a new cell 2and begins a cell update procedure.
5		←	CELL UPDATE CONFIRM	In the CELL_FACH state

Specific Message Contents

None

8.2.1.10.5 Test requirement

After step3 the UE shall find a new cell No.2 and enter to CELL_FACH state. Then the UE shall initiate a cell update procedure in cell No.2.

8.2.1.11 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.11.1 Definition

8.2.1.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.11.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message.

8.2.1.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS sends a RADIO BEARER SETUP message to request the UE to perform radio bearer establishment procedure. Before the UE can complete the configuration of the radio bearer, the SS transmits another RADIO BEARER SETUP message. The UE shall keep the old configuration and transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Message includes IE"PRACH info (for RACH)"
2		←	RADIO BEARER SETUP	Message includes the IE "Uplink DPCH info"
3		→	RRC STATUS	The UE does not change the configuration. UE shall not have access to the DTCH channel indicated in the RADIO BEARER SETUP messages of step 1 and step 2.

Specific Message Contents

RADIO BEARER SETUP (Step 1)

For this message, use the message sub-type entitled "Packet to CELL_FACH from CELL_DCH in PS" in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RADIO BEARER SETUP (Step 2)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Not Present.

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.1.11.5 Test requirement

After step2 the UE shall keep its configuration and not access any of the DTCH traffic channels specified in either of the RADIO BEARER SETUP message. It shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.1.12 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.1.12.1 Definition

8.2.1.12.2 Conformance requirement

The UE shall keep its old configuration when it receives a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". It shall then transmit a RADIO BEARER SETUP FAILURE message which is set to "protocol error" in IE" failure cause" and also contains value "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.12.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if the received a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject".

8.2.1.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state, after the test operator makes an outgoing packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". The UE shall keep the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The value "protocol error" shall be set in IE" failure cause" and also value "Information element value not comprehended" set in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	SS sends this message which contains an error in the IE"DRX Indicator".
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_FACH from CELL_DCH in PS" in the default contents clause of layer 3 messages for RRC tests. The following exceptions should be applied:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.12.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE" failure cause" and is set to "Information element value not comprehended" in IE" Protocol error cause".

8.2.1.13 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success

8.2.1.13.1 Definition

8.2.1.13.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.13.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state, after SS prompts the test operator to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1 including the start of tx/rx. After the UE receives this message, it configures them and establishes the required radio bearers. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				To confirm the communication

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in the default contents clause of layer 3 messages for RRC tests.

8.2.1.13.5 Test requirement

After step2 the UE shall communicate with the SS using the radio bearer indicated in RADIO BEARER SETUP message. Particularly, SS should be able to receive packet data using a terminal equipment (TE) attached to the UE.,.

8.2.1.14 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.1.14.1 Definition

8.2.1.14.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message which includes an unsupported configuration and then transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, which sets value "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.14.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of it receiving a RADIO BEARER SETUP message, which includes parameters of an unsupported configuration.

8.2.1.14.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message with a stated frequency that cannot be supported by the UE. After the UE receives this message, it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting value "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message includes an unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE shall transmit this message using RLC-AM mode and do not change the current configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	0 Not Present

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.1.14.5 Test requirement

After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

8.2.1.15 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.15.1 Definition

8.2.1.15.2 Conformance requirement

The UE shall attempt to revert to the old configuration when the UE fails to configure the new radio bearer by the T312 expiry. It shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC containing value "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.15.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message when the UE fails to configure the new radio bearer when it detects physical channel failure, followed by the T312 expiry.

8.2.1.15.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message to the UE and does not configure the new radio bearer. After T312 expiry, the UE shall revert to the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The content of the message shall indicate "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	The SS does not configure a new radio bearer.
2				The UE does not configure a new radio bearer but reverts to the old configuration.
3		→	RADIO BEARER SETUP FAILURE	

Specific Message Contents

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.1.15.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

8.2.1.16 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and reversion failure)

8.2.1.16.1 Definition

8.2.1.16.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer establishment procedure.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.16.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot establish the new radio bearer for the L1 configuration and subsequently fail to revert to the old configuration.

8.2.1.16.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 but with a transmission level lower than that for cell 1. It then transmits a RADIO BEARER SETUP message to the UE from cell 1. Then the SS deletes the old downlink channel configuration after sending this message. This causes the UE to fail to configure L1 and could not revert to the old configuration. The UE shall find the presence of cell 2 and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message. The message shall include the IE"U-RNTI" and sent on the uplink CCCH. The SS responds with an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS transmits the BCCH in cell 2, but with a power level lower than that in cell 1.
2		←	RADIO BEARER SETUP	The SS does not configure the new radio bearer and instead delete the old configuration.
3				The UE cannot configure a new radio bearer and cannot revert to old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find the presence of cell2It shall then transmit this message including its assigned U-RNTI in the IE"U-RNTI".
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

RADIO BEARER SETUP The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type "Packet to CELL_DCH from CELL_FACH in PS" found in the default contents of layer 3 messages for RRC tests.

RRC CONNECTION RE-ESTABLISHMENT REQUEST

Information Element	Value/remark
U-RNTI	Set to assigned UE U-RNTI in RRC CONNECTION SETUP message.
Protocol error indication	FALSE

RRC CONNECTION RE-ESTABLISHMENT COMPLETE

Information Element	Value/remark
Radio bearer uplink ciphering activation time info	Not Present
RB with PDCP information list - RB with PDCP information list	Not Present

8.2.1.16.5 Test requirement

After step3 the UE shall find the presence of cell 2, which is suitable for camping. It shall then enter CELL_FACH state and transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST message to prevent the RRC connection from being lost.

After step6 the UE shall re-establish an RRC connection, using the new TFCS settings specified in RRC CONNECTION RE-ESTABLISHMENT message

8.2.1.17 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.17.1 Definition

8.2.1.17.2 Conformance requirement

The UE shall keep its old configuration, when it receives another RADIO BEARER SETUP message before it can complete the configuration of the radio bearer according to the first RADIO BEARER SETUP message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC with value "Message not compatible with receiver state" set in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.17.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER SETUP message, before the UE configures the radio bearer according to an earlier RADIO BEARER SETUP message.

8.2.1.17.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message, requesting the UE to setup radio bearers using DPCH physical channels. The activation time of this event is specified to be 255 frames from the SS's current CFN. However, SS sends another RADIO BEARER SETUP message before 255 frames has passed. The UE shall then abandon its current reconfiguration operation, keep the old configuration, and transmit an RRC STATUS message on the DCCH using AM RLC. This message shall contain the value "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including IE"Uplink DPCH info"
2		←	RADIO BEARER SETUP	
3		→	RRC STATUS	The UE does not change the configuration and transmit this message on its uplink DCCH using the same RLC-AM mode radio bearer before step 1.

Specific Message Contents

RADIO BEARER SETUP (for Step 2)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
RRC STATUS	
Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.1.17.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.1.18 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.1.18.1 Definition

8.2.1.18.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" having criticality defined as "Reject". It shall transmit a RADIO BEARER SETUP FAILURE message which set value "protocol error" in IE" failure cause" and also value "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.18.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message, with a spare value in the mandatory IE" DRX indicator" and having criticality defined as "Reject".

8.2.118.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER SETUP message to the UE which includes a spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". The UE keeps the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. This message shall specify "protocol error" in IE" failure cause" and also set the value "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.18.5 Test requirement

After step1 the UE shall keep its old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The message shall indicate the reason of failure as "protocol error" in IE" failure cause" and set the value "Information element value not comprehended" in IE" Protocol error cause".

8.2.1.19 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Success

8.2.1.19.1 Definition

8.2.1.19.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.19.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state, after the test operator is being prompted to make an outgoing packet-switched call. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1 including the start of tx/rx. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				To confirm the proper establishment of the new radio bearer by checking the packet data exchanged between the SS and a TE attached to the UE.

Specific Message Contents

RADIO BEARER SETUP

For this message, use the message sub-type entitled "Packet to CELL_FACH from CELL_FACH in PS" in the default message content.

8.2.1.19.5 Test requirement

After step2 the UE shall communicate with the SS using the new radio bearer , this can be confirmed by the exchange of packet data between a terminal equipment (TE) attached to the UE and the SS,

8.2.1.20 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Failure (Unsupported configuration)

8.2.1.20.1 Definition

8.2.1.20.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message which includes an unsupported configuration and it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting the value "configuration unacceptable" into IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.20.3 Test purpose

To confirm that the UE keeps its original configuration and transmits a RADIO BEARER SETUP FAILURE message when it receives a RADIO BEARER SETUP message indicating an unsupported configuration.

8.2.1.20.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message specifying a frequency which is not supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63947
- UARFCN downlink(Nd)	Not present

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.1.20.5 Test requirement

After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC and set value "configuration unacceptable" in IE" failure cause".

8.2.1.21 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.21.1 Definition

8.2.121.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message and the UE shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.21.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message.

8.2.1.21.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER SETUP message to the UE before the UE configures the radio bearer the UE keeps the old configuration and transmits an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including IE"Uplink DPCH info"
2		←	RADIO BEARER SETUP	
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.1.21.5 Test requirement

- After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.1.22 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.1.22.1 Definition

8.2.1.22.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which includes a spare value for the mandatory IE" DRX indicator" having criticality defined as "Reject". It shall then transmit a RADIO BEARER SETUP FAILURE message stating the reason "protocol error" in IE" failure cause" and also set value "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.22.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message specifying a spare value in the mandatory IE" DRX indicator"

8.2.1.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message to the UE and includes the spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration and

transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value “protocol error” in IE” failure cause”. The error type “Information element value not comprehended” shall also be indicated in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type “Packet to CELL_FACH from CELL_FACH in PS “, which is found in the default contents clause of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

The expected content of RADIO BEARER SETUP FAILURE message is shown below:

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.22.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting “protocol error” in IE” failure cause” and setting “Information element value not comprehended” in IE” Protocol error cause”.

8.2.2 Radio Bearer Reconfiguration

8.2.2.1 Radio Bearer Reconfiguration(Hard handover) from CELL_DCH to CELL_DCH:Success

8.2.2.1.1 Definition

8.2.2.1.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer or L1 according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.1.3 Test purpose

To confirm that the UE reconfigure a new radio bearer by following a RADIO BEARER RECONFIGURATION message received from the SS.

8.2.2.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new transport channel parameter reconfigure. The UE reconfigures the new

transport channel and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				<u>UE shall commence the Reconfiguration of the affected Physical channel.</u>
3		→	RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Selected value as the UE can support which is different from current frequency. Selected value as the UE can support which is different from current frequency.

8.2.2.1.5 Test requirement

After step1 the UE shall reconfigure the radio links with the SS.

After step3 the UE shall change its physical channel configuration and communicate with the SS on the DCCH and DTCH using the modified physical channel configurations

8.2.2.2 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.2.2.1 Definition

8.2.2.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.2.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message includes unsupported configuration parameters.

8.2.2.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984. Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.2.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the value "configuration unacceptable" set in IE" failure cause".

8.2.2.3 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.2.3.1 Definition

8.2.2.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by received RADIO BEARER RECONFIGURATION message and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to the RADIO BEARER RECONFIGURATION message received previously.

8.2.2.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new radio bearer parameters but it does not reconfigure L1 according to the settings found in the message. The UE shall revert to the old configuration. Then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting value ".physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				SS does not reconfigure L1 parameters to reflect the radio bearer reconfigurations specified in the message.
3		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall detect a failure to reconfigure the new radio bearer, and send this message using the old radio bearer configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	Physical channel failure
Other information element	Not checked

8.2.2.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC setting value "physical channel failure" in IE" failure cause".

8.2.2.4 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH : Failure (Physical channel failure and reversion failure)

8.2.2.4.1 Definition

8.2.2.4.2 Conformance requirement

.The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot reconfigure the new radio bearer, and a subsequent failure to revert to the old configuration.

8.2.2.4.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in a cell 1. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters. The SS does not reconfigure L1 in accordance to the settings in the message and delete all radio bearer related contexts in cell 1. At the same time, SS begins to broadcast the BCCH in a cell 2. The UE discovers that it cannot reconfigure the new radio bearer and wants to revert to the old configuration. The UE shall find cell 2 and transmit to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which specifies a new TFCS according to the new transport channel allocated. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the new radio bearer and delete the old configuration in cell 1.
3				The UE fails to reconfigure a new radio bearer.
4		←	BCCH	The SS transmits a BCCH in a cell 2 and deletes the old radio bearer.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds cell.2and transmits this message which includes the IE"U-RNTI" it was previously assigned.
6		←	RRC CONNECTION RE-ESTABLISHMENT	This message includes a new TFCS according to the new transport channel indicated in RRC CONNECTION RE-ESTABLISHMENT message.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.2.4.5 Test requirement

After step4 the UE shall detect the presence of cell.2, enters CELL_FACH state, and transmit RRC CONNECTION RE-ESTABLISHMENT to attempt to keep the current RRC connection.

After step7 the UE shall successfully re-establish an RRC connection.

8.2.2.5 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.5.1 Definition

8.2.2.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can configure the radio bearer according to an earlier RADIO BEARER RECONFIGURATION message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC setting "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.5.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can complete the configuration of the radio bearer indicated in an earlier RADIO BEARER RECONFIGURATION message.

8.2.2.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the requested radio bearer(s), the UE keeps the old

configuration and transmits an RRC STATUS message on the DCCH using AM RLC. This message shall set value "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE"Uplink DPCH info"
2		←	RADIO BEARER RECONFIGURATION	Sent before the "activation time" in step 1 has elapsed
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	"RRC STATUS"
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.2.5.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC which contains the value "Message not compatible with receiver state" set in IE" Protocol error cause".

8.2.2.6 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception)

8.2.2.6.1 Definition

8.2.2.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message, which includes the spare value in the mandatory IE" DRX indicator" having criticality defined as "Reject". The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message which is set to "protocol error" in IE" failure cause" and is set to "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.6.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, if it receives a RADIO BEARER RECONFIGURATION message containing a spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject".

8.2.2.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the spare value in the mandatory IE" DRX indicator" which criticality is defined as "Reject". The UE keeps the old configuration and transmits a RADIO BEARER RECONFIGURATION

FAILURE message on the DCCH using AM RLC which is set to “protocol error” in IE” failure cause” and is set to “Information element value not comprehended” in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message contains a illegal error in a mandatory IE.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests, with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“RADIO BEARER RECONFIGURATION FAILURE”
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC stating the reason “protocol error” in IE” failure cause”. The message shall contain the value “Information element value not comprehended” in IE” Protocol error cause”.

8.2.2.7 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH :Failure (Suspension of signalling bearer)

8.2.2.7.1 Definition

8.2.2.7.2 Conformance requirement

The UE shall revert to the old configuration prior to the reception of RADIO BEARER RECONFIGURATION message, which includes IE”RBSuspend/resume” specified as “Suspend”, and transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.7.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which specifies the suspension of a signalling radio bearer to be reconfigured. The UE shall revert

to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the IE" failure cause" set to "configuration unacceptable".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Specifies a signalling radio bearer to be suspended.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list RB information to reconfigure I -RB identity -RB suspend/resume	3 "Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	"RADIO BEARER RECONFIGURATION FAILURE" Configuration unacceptable Not checked

8.2.2.7.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC specifying the reason "configuration unacceptable " in IE" failure cause".

8.2.2.8 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Success

8.2.2.8.1 Definition

8.2.2.8.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer in case of a transition from CELL_DCH to CELL_FACH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.8.3 Test purpose

To confirm that the UE establishes the reconfigured radio bearer(s) using common physical channel, after a RADIO BEARER RECONFIGURATION message has been received from the SS.

8.2.2.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters and sets up L1 including the start of tx/rx. The UE reconfigures the new radio bearer and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				Reconfiguration of radio bearer
3		→	RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

~~None~~

RADIO BEARER RECONFIGURATION ([Step 1](#))

[Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.](#)

8.2.2.8.5 Test requirement

After step1 the UE shall reconfigure the radio links with the SS.

After step3 the UE shall change its radio bearer configuration and communicate with the SS on the DCCH and DTCH, using the common physical channel allocated in RADIO BEARER RECONFIGURATION message.

8.2.2.9 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Unsupported configuration)

8.2.2.9.1 Definition

8.2.2.9.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.9.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message indicates an unsupported configuration parameters.

8.2.2.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984. Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.9.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason "configuration unacceptable" in IE" failure cause".

8.2.2.10 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Physical channel failure)

8.2.2.10.1 Definition

8.2.2.10.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER CHANNEL RECONFIGURATION message, during the transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.10.3 Test purpose

To confirm that the UE initiate a cell reselection after encountering a physical channel failure, when attempting to transit from CELL_DCH to CELL_FACH state during the execution of radio bearer reconfiguration procedure. The UE is first instructed to select the cell implied in the RADIO BEARER RECONFIGURATION message, but discover a failure as the indicated cell is not present.

8.2.2.10.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and cell 2 is inactive

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. SS starts to transmit the BCCH for cell 2, but with a power level lower than that of cell 1. Following this, the SS send a RADIO BEARER RECONFIGURATION message to the UE, which includes relevant information about the target cell's P-CPICH. SS selects an unused primary scrambling code for P-CPICH, which neither matches the code used by cell 1 nor cell 2. This should lead to the detection of a physical channel failure in the UE. The UE shall trigger a cell reselection and initiate a cell

update procedure if it is able to access cell 2. When SS receives a CELL UPDATE message in cell 2 on uplink CCCH, it replies with CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS begin to broadcast the BCCH data in cell 2, but with a power level lower than in cell 1.
2		←	RADIO BEARER RECONFIGURATION	The message includes IE "Primary CPICH Info" and set the IE "Primary Scrambling Code" to an unknown value (not used by cell 1 or cell 2).
3				UE shall detect a "physical channel failure" condition and then trigger a cell reselection procedure.
4		→	CELL UPDATE	After successfully camping onto cell 2, UE shall initiate a cell update procedure. The updating cause shall be set to "cell reselection"
5		←	CELL UPDATE CONFIRM	Contains cell

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Downlink information for each radio link - Primary CPICH Info - Primary Scrambling Code	Set to an unused code different from the 3 cells defined.

CELL UPDATE

Information Element	Value/remark
U-RNTI	The assigned U-RNTI indicated In RRC CONNECTION SETUP message
Cell Update Cause	Cell Reselection

8.2.2.10.5 Test requirement

After step3, the UE shall discover the presence of cell 2, enter CELL_FACH and then perform a cell updating procedure by the transmission of CELL UPDATE using RLC-TM mode on CCCH. The UE shall transit to CELL_PCH state to monitor the PCCH channel after the reception of CELL UPDATE CONFIRM message.

8.2.2.11 Radio Bearer Reconfigure from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.11.1 Definition

8.2.2.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before it completes the re-configuring the radio bearer according to an earlier RADIO BEARER RECONFIGURATION message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC, setting "Message not compatible with receiver state" in IE "Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.11.3 Test purpose

To confirm that the UE keeps its current radio bearer configurations and transmits an RRC STATUS message when the UE receives another RADIO BEARER RECONFIGURATION message before it is able to complete an earlier reconfiguration request.

8.2.2.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the radio bearer the UE keeps the old configuration and transmits an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE"Uplink DPCH info"
2		←	RADIO BEARER RECONFIGURATION	
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

The contents of RADIO BEARER RECONFIGURATION messages in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

RADIO BEARER RECONFIGURATION (Step 1)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RADIO BEARER RECONFIGURATION (Step 2)

Information Element	Value/remark
Activation Time	Not Present

RRC STATUS

Information Element	Value/remark
Message Type	"RRC STATUS"
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.2.11.5 Test requirement

After step2 the UE shall keep its exiting radio bearer configuration and transmit an RRC STATUS message on the DCCH using AM RL, with the value "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.2.12 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.2.12.1 Definition

8.2.2.12.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes the spare value in the mandatory IE" DRX indicator", possessing a criticality level defined as "Reject". It shall transmit a RADIO BEARER RECONFIGURATION FAILURE message which is set to "protocol error" in IE" failure cause" and is also set to "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.12.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC to respond to an earlier RADIO BEARER RECONFIGURATION message, which applies a spare value in the mandatory IE" DRX indicator" having criticality defined as "Reject".

8.2.2.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE" failure cause" and setting "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.12.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with "protocol error" specified in IE" failure cause" and also "Information element value not comprehended" specified in IE" Protocol error cause".

8.2.2.13 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Suspension of signalling bearer)

8.2.2.13.1 Definition

8.2.2.13.2 Conformance requirement

The UE shall revert to the configuration prior to the reception of the RADIO BEARER RECONFIGURATION message which indicates suspension for an existing signalling radio bearer in IE"RB suspend/resume". It shall transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.13.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE receives RADIO BEARER RECONFIGURATION message asking for the suspension of an existing signalling radio bearer.

8.2.2.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the IE"RB suspend/resume" set to "Suspend" for one signalling radio bearer. The UE shall revert to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message requests for the suspension of a current available signalling radio bearer
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list RB information to reconfigure l -RB Identity -RB suspend/resume	3 "Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	"RADIO BEARER RECONFIGURATION FAILURE" configuration unacceptable Not checked

8.2.2.13.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC specifying "configuration unacceptable " in IE" failure cause".

8.2.2.14 Radio Bearer Reconfiguration: from CELL_FACH to CELL_DCH: Success

8.2.2.14.1 Definition

8.2.2.14.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer in case of a transition from CELL_FACH to CELL_DCH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.14.3 Test purpose

To confirm that the UE establishes a new radio bearer by following a RADIO BEARER RECONFIGURATION message received from the SS.

8.2.2.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new radio bearer parameters and sets up L1 including the start of tx/rx. The UE reconfigures the new radio bearer and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	This message includes IE"Uplink DPCH Info"
2				Reconfiguration of radio bearer
3		→	RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION ([Step 1](#))

~~None~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

8.2.2.14.5 Test requirement

After step2 the UE shall change its radio bearer configuration and communicate with the SS on the DCCH and DTCH which are being carried by the DPCH physical channel resources.

8.2.2.15 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.2.15.1 Definition

8.2.2.15.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.15.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the RADIO BEARER RECONFIGURATION message received includes unsupported configuration parameters.

8.2.2.15.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes unsupported configuration parameters of the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC and set "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message includes an unsupported configuration for the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.2.15.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC stating "configuration unacceptable" in IE" failure cause".

8.2.2.16 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.2.16.1 Definition

8.2.2.16.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by received RADIO BEARER RECONFIGURATION message and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.16.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.16.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters and does not reconfigure L1. Therefore, the UE

cannot reconfigure the new radio bearer and shall attempt to revert to the old configuration. Then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigures L1 including the start of tx/rx
3		→	RADIO BEARER RECONFIGURATION FAILURE	The UE fails to reconfigure a new radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.2.16.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE" failure cause".

8.2.2.17 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.2.17.1 Definition

8.2.2.17.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.17.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure, when the UE cannot reconfigure the new radio bearer following a failure to configure L1 parameters for the new radio bearer settings and also a reversion failure to the old configuration.

8.2.2.17.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters but does not reconfigure L1 to cater to the new radio bearer settings. The UE cannot reconfigure the new radio bearer and wants to revert to the old configuration. But the SS does not configure the old radio bearer and begins to broadcast the BCCH in a cell 2 and stops broadcasting the BCCH in cell 1. Then the UE finds a new cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE"U-RNTI" on the uplink CCCH. The SS replies with an RRC CONNECTION RE-ESTABLISHMENT message, specifying a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the new radio bearer and delete the old configuration.
3				The UE shall detect a failure to reconfigure a new radio bearer, and start to revert to old configuration.
4		←	BCCH	The SS starts to transmit the BCCH in cell 2 and delete the old radio bearer settings in cell 1.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell.2 and transmits this message which includes the IE"U-RNTI" it possesses.
6		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.2.17.5 Test requirement

After step4 the UE shall detect the presence of cell 2, enter CELL_FACH state, and attempt to perform RRC connection re-establishment procedure.

After step7 the UE shall successfully re-establish an RRC connection, and be able to access the dedicated physical resources in cell 2.

8.2.2.18 Radio Bearer Reconfigure from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.18.1 Definition

8.2.2.18.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before it completes the reconfiguration of the new radio bearers specified in RADIO BEARER RECONFIGURATION message. Following this, the UE shall transmit an RRC STATUS message on the DCCH using AM RLC with value "Message not compatible with receiver state" set in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.18.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER RECONFIGURATION message before the UE configures the radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.18.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the completion of a radio bearer reconfiguration commanded earlier, the UE keeps the old configuration. The UE shall also transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE"Uplink DPCH info"
2		←	RADIO BEARER RECONFIGURATION	Sent before the elapse of the "Activation Time" indicated in the previous RADIO BEARER RECONFIGURATION message.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	"RRC STATUS"
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.2.18.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.2.19 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.2.19.1 Definition

8.2.2.19.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message, which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". Then it shall transmit a RADIO BEARER RECONFIGURATION FAILURE message setting "protocol error" in IE" failure cause" and also setting "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.19.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RECONFIGURATION message which includes the spare value in the mandatory IE" DRX indicator", with criticality defined as "Reject".

8.2.2.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating "protocol error" in IE" failure cause" and also set "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.19.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, which contain the cause "protocol error" in IE" failure cause" and "Information element value not comprehended" in IE" Protocol error cause".

8.2.2.20 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Suspension of signalling bearer)

8.2.2.20.1 Definition

8.2.2.20.2 Conformance requirement

The UE shall revert to the configuration prior to the reception of the RADIO BEARER RECONFIGURATION message which specifies the suspension of an existing signalling radio bearer. It shall then transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.20.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer due to an inappropriate suspension request in RADIO BEARER RECONFIGURATION message.

8.2.2.20.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the IE"RB suspend/resume" set to "Suspend" for one existing signalling radio bearer. The UE shall revert to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message includes IE"RB suspend/resume" for one of the signalling radio bearer.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list RB information to reconfigure I -RB identity -RB suspend/resume	2 Set to the"Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	"RADIO BEARER RECONFIGURATION FAILURE" configuration unacceptable Not checked

8.2.2.20.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall contain the value "configuration unacceptable " in IE" failure cause".

8.2.2.21 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH:Success

8.2.2.21.1 Definition

8.2.2.21.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer and a transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.22.3 Test purpose

To confirm that the UE establishes a new radio bearer by following a RADIO BEARER RECONFIGURATION message received from the SS.

8.2.2.21.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. [SS begins to broadcast the BCCH of cell 2.](#) The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new transport channel parameter reconfigure for transit. The UE reconfigures the new transport channel and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to broadcast the BCCH in cell 2.
2		←	RADIO BEARER RECONFIGURATION	including Primary CPICH Info for cell 2.
3				Reconfiguration of Transport channel
4		→	RADIO BEARER RECONFIGURATION COMPLETE	Received on the uplink DCCH of cell 2.

Specific Message Contents

~~None~~ [RADIO BEARER RECONFIGURATION \(Step 2\)](#)

[Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A.](#)

8.2.2.21.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_FACH in the another cell and communicate with the SS on the DCCH and DTCH using the modified transport channel configurations

8.1.2.2.22 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Unsupported configuration)

8.2.2.22.1 Definition

8.2.2.22.2 Conformance requirement

This procedure is used to handle the case of a failure to reconfigure radio bearer(s) or signalling link(s), following a detection of an unsupported configuration by the UE.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.22.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message includes unsupported configuration parameters.

8.2.2.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984. Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.22.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the value "configuration unacceptable" set in IE" failure cause".

8.2.2.23 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Physical channel failure)

8.2.2.23.1 Definition

8.2.2.23.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.23.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to the RADIO BEARER RECONFIGURATION message received previously.

8.2.2.23.4 Method of test

Initial Condition

System Simulator : 3 cells Cell 1 is active, Cell 2 is inactive, Cell 3 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a RADIO BEARER RECONFIGURATION message, resulting in the UE to attempt to transit from CELL_FACH in cell 1 to CELL_FACH in cell 3. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 3. After the UE successfully camp onto cell 2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
<u>1</u>		<u>←</u>	<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
<u>12</u>		←	RADIO BEARER RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_FACH in cell 1 to CELL_FACH in cell 3
<u>2</u>			<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_PCH state.

Specific Message Contents

~~None~~ Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>Downlink information for each radio links</u> - Primary CPICH Info - Primary scrambling code	<u>200</u>

8.2.23.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.2.24 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.24.1 Definition

8.2.2.24.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can configure the radio bearer according to an earlier RADIO BEARER RECONFIGURATION message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC setting "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.24.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can complete the configuration of the radio bearer indicated in an earlier RADIO BEARER RECONFIGURATION message.

8.2.2.24.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the requested radio bearer(s), the UE keeps the old configuration and transmits an RRC STATUS message on the DCCH using AM RLC. This message shall set value "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE"Uplink DPCH info"
2		←	RADIO BEARER RECONFIGURATION	Sent before the "activation time" in step 1 has elapsed
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RC STATUS

Information Element	Value/remark
Message Type	"RRC STATUS"
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.2.24.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC which contains the value "Message not compatible with receiver state" set in IE" Protocol error cause".

8.2.2.25 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.2.25.1 Definition

8.2.2.25.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message, which includes the spare value in the mandatory IE" DRX indicator" having criticality defined as "Reject". The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message which is set to "protocol error" in IE" failure cause" and is set to "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.25.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, if it receives a RADIO BEARER RECONFIGURATION message containing a spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject".

8.2.2.25.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the spare value in the mandatory IE" DRX indicator" which criticality is defined as "Reject". The UE keeps the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE" failure cause" and is set to "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message contains a illegal error in a mandatory IE.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests, with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.25.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC stating the reason "protocol error" in IE" failure cause". The message shall contain the value "Information element value not comprehended" in IE" Protocol error cause".

8.2.2.26 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH :Failure (Suspension of signalling bearer)

8.2.2.26.1 Definition

8.2.2.26.2 Conformance requirement

The UE shall revert to the old configuration prior to the reception of RADIO BEARER RECONFIGURATION message, which includes IE"RBSuspend/resume" specified as "Suspend", and transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.26.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.26.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which specifies the suspension of a signalling radio bearer to be reconfigured. The UE shall revert to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the IE" failure cause" set to "configuration unacceptable".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Specifies a signalling radio bearer to be suspended.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list RB information to reconfigure l -RB identity -RB suspend/resume	3 "Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	"RADIO BEARER RECONFIGURATION FAILURE" Configuration unacceptable Not checked

8.2.2.26.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC specifying the reason "configuration unacceptable " in IE" failure cause".

8.2.3 Radio Bearer Release

8.2.3.1 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success

8.2.3.1.1 Definition

8.2.3.1.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.1.3 Test purpose

To confirm that the UE release the existing radio bearer according to a RADIO BEARER RELEASE message received from the SS.

8.2.3.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE release the radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				Release the radio bearer
3		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

None

8.2.3.1.5 Test requirement

After step1 the UE shall release its radio bearers.

After step3 the UE shall stop communicating on the released radio bearers, no uplink transmission shall be observed originating from the released link. The remaining radio bearers shall continue to be operational.

8.2.3.2 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.3.2.1 Definition

8.2.3.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message which includes unsupported configuration parameters and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting value "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.2.3 Test purpose

To confirm that the UE keeps its current configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, if the received RADIO BEARER RELEASE message indicates an unsupported configuration parameters for the UE.

8.2.3.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE specifying a frequency which is not supported by the UE. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC indicating "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	Including unsupported configuration by the UE
2		→	RADIO BEARER RELEASE FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	63984
- UARFCN uplink(Nu)	Not Present
- UARFCN downlink(Nd)	

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.3.2.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with the IE "failure cause" set to "configuration unacceptable". The UE shall be able to continue receiving and sending user data.

8.2.3.3 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.3.3.1 Definition

8.2.3.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to configure the new radio bearer by timer T312 expiry and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearer according to a RADIO BEARER RELEASE message by timer T312 expiry.

8.2.3.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message but it does not configure L1 correspondingly. This causes the UE to fail to release the radio bearer, and after T312 expiry the UE reverts to the old configuration. The UE then transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which specifies ".physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The SS does not configure L1 to reflect the release of the indicated bearer.
3		→	RADIO BEARER RELEASE FAILURE	After T312 expiry, the UE finds that it fails to release a radio bearer and reverts to the old configuration.

Specific Message Contents

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.3.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which includes the value “physical channel failure” in IE” failure cause”.

8.2.3.4 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure(Physical channel failure and reversion failure)

8.2.3.4.1 Definition

8.2.3.4.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer release procedure.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot revert to the old configuration after encountering a physical channel failure during the execution of a radio bearer release procedure.

8.2.3.4.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell.2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 with a lower power level than for cell 1. At the same time, it transmits a RADIO BEARER RELEASE message to the UE but does not configure L1. As a result, the UE fails to release the radio bearer properly and tries to revert to the old configuration after T312 expiry. But the SS deletes the old radio bearer so the UE shall find the availability of cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE”U-RNTI” and sent on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit the BCCH for cell 2 but at a lower power level than cell 1.
2		←	RADIO BEARER RELEASE	
3				The SS does not configure L1 and deletes the old configuration. This is expected to cause the UE to fail in the release the radio bearer and can not revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell 2 and then transmit this message which includes the IE"U-RNTI" set to its assigned connected mode identity.
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None.

8.2.3.4.5 Test requirement

After step 3 the UE shall find the presence of cell 2, enter CELL_FACH state, and transmits RRC CONNECTION RE-ESTABLISHMENT REQUEST message on the uplink CCCH of cell 2.
After step6 the UE shall successfully re-establish an RRC connection, after sending RRC CONNECTION RE-ESTABLISHMENT COMPLETE message.

8.2.3.5 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.5.1 Definition

8.2.3.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message before the UE is able to release the indicated radio bearer according to a RADIO BEARER RELEASE message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.5.3 Test purpose

To confirm that the UE keeps its configuration when the UE receives another RADIO BEARER RELEASE message before the UE releases the radio bearer according to the earlier RADIO BEARER RELEASE message.

8.2.3.5.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. SS transmits a RADIO BEARER RELEASE message on the downlink DCCH, requesting the UE to release all radio bearers mapped to dedicated transport channels. When Next, the SS transmits another RADIO BEARER RELEASE message to the UE before the UE is able to releases the radio bearers requested in the earlier message. The UE shall keeps the old configuration. It shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Message sent before the "activation time" indicated in the message of step 1 has elapsed.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RECONFIGURATION RELEASE message in this test case is identical to these message sub-type title "Packet to CELL_FACH from CELL_DCH in PS" found in default contents of layer 3 messages for RRC tests Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RADIO BEARER RELEASE (Step 2)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A.

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.3.5.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.3.6 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception)

8.2.3.6.1 Definition

8.2.3.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message which includes the spare value in the mandatory IE" DRX indicator". It shall transmit a RADIO BEARER RELEASE FAILURE message which contains value "protocol error" in IE" failure cause" and value "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.6.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message, which uses a spare value in the mandatory IE" DRX indicator".

8.2.3.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE which includes the spare value in the mandatory IE "DRX indicator". The UE keeps the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. This message shall indicate "protocol error" in IE "failure cause" and also "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to that found in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	Spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, which is set to "protocol error" in IE "failure cause" and is set to "Information element value not comprehended" in IE "Protocol error cause".

8.2.3.7 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Success

8.2.3.7.1 Definition

8.2.3.7.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message, when the common physical channel are requested to be used for the remaining radio bearers.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.7.3 Test purpose

To confirm that the UE release the existing the radio bearer according to a RADIO BEARER RELEASE message received from the SS.

8.2.3.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE release the radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	<u>SS releases the radio bearer in the fashion specified in the message and allocate common channel resources to carry the remaining radio bearers.</u>
2				<u>SS releases the radio bearer in the fashion specified in the message and allocate common channel resources to carry the remaining radio bearers.UE shall release radio bearers on dedicated transport channels, and reconfigure the remaining radio bearers using the given common control channel.</u>
3		→	RADIO BEARER RELEASE COMPLETE	UE shall be able to continue communication over the remaining radio bearers using the allocated common control channels.

Specific Message Contents

~~None~~RADIO BEARER RELEASE (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

8.2.3.7.5 Test requirement

After step3 the UE shall release the specified radio bearer(s) and cease any further uplink transmission from these radio bearer(s). At the same time, it shall resume the transmission or reception of data for the previously suspended radio bearers.

8.2.3.8 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Failure (Unsupported configuration)

8.2.3.8.1 Definition

8.2.3.8.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message, which includes an unsupported configuration parameters and then transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.8.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RELEASE message includes unsupported configuration parameters for the UE.

8.2.3.8.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELAESE message to the UE as the frequency cannot be supported by the UE. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and set value "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	The message Includes a configuration unsupported by the UE.
2		→	RADIO BEARER RELAESE FAILURE	The UE does not alter the current radio bearer configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not present

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.3.8.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

8.2.3.9 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Failure (Physical channel failure)

8.2.3.9.1 Definition

8.2.3.9.2 Conformance requirement

The UE shall initiate the cell update procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER RELEASE message as the transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.9.3 Test purpose

To confirm that the UE perform a cell update procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER RELEASE message as the transition from CELL_DCH to CELL_FACH.

8.2.3.9.4 Method of test

Initial Condition

System Simulator : 2 cells □ No.1 is active, No.2 is inactive □

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state in cell No.1. The SS begins to broadcast the BCCH in cell No.2 and transmits a RADIO BEARER RELEASE message as the transition from CELL_DCH to CELL_FACH. The UE cannot use the assigned physical channel as the SS does not transmit any data on the DL common channel in cell No.1. Then the UE initiate the cell update procedure in cell No.2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
<u>1</u>		←	<u>BCCH</u>	<u>The SS broadcasts BCCH in cell No.2.</u>
<u>2</u>		←	RADIO BEARER RELEASE	Assigned the transition from CELL_DCH to CELL_FACH
<u>3</u>			<u>BCCH</u>	<u>The SS broadcasts BCCH in cell No.2.</u>
3				The UE cannot use the assigned the physical channel.
4		→	CELL UPDATE	The UE finds a new cell •No.2• and begins a cell update procedure.
5		←	CELL UPDATE CONFIRM	In the CELL_FACH state

Specific Message Contents

None

8.2.3.9.5 Test requirement

After step3 the UE shall find a new cell No.2 and enter to CELL_FACH state. Then the UE shall initiate a cell update procedure in cell No.2.

8.2.3.10 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.10.1 Definition

8.2.3.10.1 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message, before the UE manages to release the radio bearer specified in the RADIO BEARER RELEASE message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC and set value "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.10.2 Test purpose

To confirm that the UE keeps its configuration when the UE receives another RADIO BEARER RELEASE message before the UE has completed the release of the radio bearer according to a RADIO BEARER RELEASE message.

8.2.3.10.3 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the it completes the releases of the requested radio bearer, the UE keeps the old configuration. Thereafter, it transmits an RRC STATUS message on the DCCH using AM RLC and set "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Sent before the passing of the "activation time" indicated in RADIO BEARER RELEASE message in step 1.
3		→	RRC STATUS	The UE shall not change the radio bearer configuration.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.3.10.4 Test requirement

After step2 the UE shall keep its old configuration and transmit an RRC STATUS message on the DCCH using AM RLC, setting "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.3.11 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.3.11.1 Definition

8.2.3.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message. The message uses a spare value for the mandatory IE" DRX indicator". Upon receiving this message, the UE shall transmit a RADIO BEARER RELEASE FAILURE message containing the value "protocol error" in IE" failure cause" and also the value "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.11.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message which uses a spare value in the mandatory IE" DRX indicator".

8.2.3.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE which indicates a spare value in the mandatory IE "DRX indicator". The UE shall keep the old configuration and then transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. The content of this message shall indicate "protocol error" in IE "failure cause" and also "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	This message uses a spare value for a mandatory IE.
2		→	RADIO BEARER RELEASE FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	Spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.11.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which set "protocol error" in IE "failure cause" and also set "Information element value not comprehended" in IE "Protocol error cause".

8.2.3.12 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Success

8.2.3.12.1 Definition

8.2.3.12.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.12.3 Test purpose

To confirm that ~~the an~~ UE, in state CELL_FACH, releases the ~~existing~~ radio access bearer(s) according to the RADIO BEARER RELEASE message received from the SS on RACH and FACH transport channels. After the release, it shall access the affected radio bearers on the newly allocated DCH transport channel.

8.2.3.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE. In this message, SS commands the UE to release radio bearers on RACH and FACH. At the same time, SS

allocates DCH to support the affected radio bearers. The UE shall release the indicated radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				<u>UE shall R₁ release the radio access bearers carried by RACH and FACH transport channels.</u>
3		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

None
RADIO BEARER RELEASE (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

8.2.3.12.5 Test requirement

After step3 the UE shall stop communicating on the released radio bearers, and resume all suspended radio bearer using the dedicated physical channel allocated.

8.2.3.13 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.3.13.1 Definition

8.2.3.13.2 Conformance requirement

The UE shall keep its old configuration when it receives a RADIO BEARER RELEASE message which specifies unsupported configuration parameters for the UE. Then the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which, setting value "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.13.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RELEASE message requests for unsupported configuration parameters for the UE.

8.2.3.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELAESE message to the UE, referring to a frequency which cannot be supported by the UE. The UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and set "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	The message contains a configuration not supported by the UE
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change the radio bearer configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not Present

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.3.13.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, stating the reason "configuration unacceptable" in IE" failure cause".

8.2.3.14 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.3.14.1 Definition

8.2.3.14.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to configure the new radio bearer before T312 timer expiry. Then it shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.14.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearer in accordance the specified settings in RADIO BEARER RELEASE message by T312 timer expiry.

8.2.3.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message and does not configure L1. The UE is expected to encounter a failure while releasing the radio bearer. After T312 timer expiry, the UE shall revert to the old radio bearer configuration, so the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to ".physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The SS does not configure L1.
3		→	RADIO BEARER RELEASE FAILURE	After T312 expiry the UE fails to release a radio bearer and reverts to the old configuration.

Specific Message Contents

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.3.14.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value “physical channel failure” in IE” failure cause”.

8.2.3.15 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure(Physical channel failure and reversion failure)

8.2.3.15.1 Definition

8.2.3.15.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer release procedure.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.15.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot revert to the old configuration, following a physical channel failure during the radio bearer release.

8.2.3.15.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell.1 is active, Cell 2 is inactive

UE : CELL_FACH in cell No.1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a RADIO BEARER RELEASE message to the UE, but it does not configure L1. This is expected to cause the UE to experience a failure to release the radio bearer and it subsequently tries to revert to the old configuration after T312 expiry. The SS deletes the old radio bearer, so the UE shall find cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE”U-RNTI” on the uplink CCCH. After receiving this message, the SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit the BCCH in a cell 2.
2		←	RADIO BEARER RELEASE	
3				The SS does not configure L1 and deletes the old configuration so the UE cannot release the radio bearer and also fails revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds a new cell 2 and then transmits this message which includes the IE"U-RNTI" it has been assigned to.
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None.

8.2.3.15.5 Test requirement

After step3 the UE shall find the presence of cell 2, enter CELL_FACH state, and transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST on the uplink CCCH.

After step6 the UE shall successfully re-establish an RRC connection and access the dedicated physical channels assigned.

8.2.3.16 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.16.1 Definition

8.2.3.16.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message before the UE is able to release the radio bearer according to an earlier RADIO BEARER RELEASE message. The UE shall then transmit an RRC STATUS message on the DCCH using AM RLC, setting value "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.16.3 Test purpose

To confirm that the UE keeps its old configuration when it receives another RADIO BEARER RELEASE message before it releases the radio bearer according to an earlier RADIO BEARER RELEASE message.

8.2.3.16.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the UE completes the release of the radio bearer, it shall keep the old configuration and transmit an RRC STATUS message on the DCCH using AM RLC. This message shall specify the reason "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Sent before the expiry stated in IE "Activation Time" of RADIO BEARER RELEASE message in step 1.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.3.16.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an RRC STATUS message on the DCCH using AM RLC, and set the value "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.3.17 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.3.17.1 Definition

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8.2.3.17.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message which uses a spare value in the mandatory IE" DRX indicator". It shall transmit a RADIO BEARER RELEASE FAILURE message which indicate the value "protocol error" in IE" failure cause" and setting "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.17.3 Test purpose

To confirm that the UE transmits RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message which uses a spare value in the mandatory IE" DRX indicator".

8.2.3.17.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE containing a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, which shall indicate the reason "protocol error" in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change its current configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those for the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.17.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE" failure cause" and also indicating "Information element value not comprehended" in IE" Protocol error cause".

8.2.3.18 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Success

8.2.3.18.1 Definition

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8.2.3.18.2 Conformance requirement

The UE shall correctly release a radio bearer according to the RADIO BEARER RELEASE message received.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.18.3 Test purpose

To confirm that the UE release the existing the radio bearer(s) according to the RADIO BEARER RELEASE message received from the SS.

8.2.3.18.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE release the radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The UE shall release the requested radio bearer(s), and stop transmitting using these radio bearer(s).
3		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

None

8.2.3.18.5 Test requirement

After step1 the UE shall cease the transmission and reception of the affected radio bearers.

After step3 the UE shall stop communicating on radio bearers to be released.

8.2.3.19 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Failure (Unsupported configuration)

8.2.3.19.1 Definition

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8.2.3.19.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message that specifies an unsupported configuration. It shall then transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and setting the cause "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.19.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, if the received RADIO BEARER RELEASE message includes unsupported configuration parameters.

8.2.3.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE specifying a frequency, which cannot be supported by the UE. The UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, indicating "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	Including an unsupported configuration for the UE
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change the radio bearer.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not Present

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.3.19.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, and set "configuration unacceptable" in IE" failure cause".

8.2.3.20 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.20.1 Definition

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8.2.3.20.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message, before the UE releases the radio bearer according to an earlier RADIO BEARER RELEASE message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC, indicating "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.20.3 Test purpose

To confirm that the UE keeps its configuration when it receives another RADIO BEARER RELEASE message before it manage to release the radio bearer according to a RADIO BEARER RELEASE message.

8.2.3.20.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. SS transmits a RADIO BEARER RELEASE message on the downlink DCCH, requesting the UE to release all radio access bearers established. Next, When the SS transmits another RADIO BEARER RELEASE message to the UE before it completes the release of the radio bearers specified in the earlier message.~~+~~ The UE shall keep the old configuration. It then transmits an RRC STATUS message on the DCCH using AM RLC, setting "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Sent before the passing of the time indicated in "Activation Time Info" in the RADIO BEARER RELEASE message of step 1.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical to ~~those the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A found in the default contents of layer 3 messages for RRC tests~~ with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RADIO BEARER RELEASE (Step 2)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A.

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.3.20.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an RRC STATUS message on the DCCH using AM RLC, and setting "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.3.21 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.3.21.1 Definition

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8.2.3.21.2 Conformance requirement

The UE shall keep its old configuration when it receives a RADIO BEARER RELEASE message, including a spare value in the mandatory IE" DRX indicator". It shall transmit a RADIO BEARER RELEASE FAILURE message with the cause "protocol error" in IE" failure cause" and also the cause "Information element value not comprehended" set in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.21.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, if it receives a RADIO BEARER RELEASE message using a spare value in the mandatory IE" DRX indicator".

8.2.3.21.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE which includes the use of a spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration intact and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM

RLC. The message shall state “protocol error” in IE” failure cause”, and also indicate “Information element value not comprehended” in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	This message contains a mandatory IE error.
2		→	RADIO BEARER RELEASE FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.21.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. This uplink message shall state the reason “protocol error” in IE” failure cause” and also indicate “Information element value not comprehended” in IE” Protocol error cause”.

8.2.4 Transport channel reconfiguration

8.1.2.4.1 Transport channel reconfiguration from CELL_DCH to CELL_DCH(Hard handover to intra frequency): Success with no transport channel type switching

8.2.4.1.1 Definition

8.2.4.1.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a TRANSPORT CHANNEL RECONFIGURATION message which is communicate with the UTRAN on the new transport channel.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.1.3 Test purpose

To confirm that the UE reconfigures a new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new transport channel parameters. The UE reconfigures the new transport channel and transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including UE information elements("TFS")
2				Reconfiguration of a new transport channel
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements -Uplink transport Channels -Added or Reconfigured TrCH information list	Number of Transport blocks = 2
-Downlink transport Channels -Added or Reconfigured TrCH information list	Selected value as the UE can support. Number of Transport blocks = 2

8.2.4.1.5 Test requirement

After step1 the UE shall reconfigure the radio links affected by the changes for uplink and downlink DCH. .
After step3 the UE shall continue to communicate with the SS on the DCCH using the new Transport Format Set (TFS) applicable on the existing transport channel.

8.2.4.2 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.4.2.1 Definition

8.2.4.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.2.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received TRANSPORT CHANNEL RECONFIGURATION message specifies unsupported configuration parameters.

8.2.4.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters of the UE. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the event "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including unsupported configuration by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the settings used by the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements -Uplink transport Channels -Added or Reconfigured TrCH information list	Number of Transport blocks = 4096
-Downlink transport Channels -Added or Reconfigured TrCH information list	Selected value as the UE can not support. Number of Transport blocks = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.4.2.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "configuration unacceptable" in IE" failure cause".

8.2.4.3 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.4.3.1 Definition

8.2.4.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by received TRANSPORT CHANNEL RECONFIGURATION message and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.3.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new transport channel parameters but it does not reconfigure the new transport channel. Therefore, the UE cannot reconfigure them and have to revert to the old configuration. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Specifies a change in the TFS of the dedicated transport channel used.
2				The SS does not reconfigure the transport channel, leading to the UE unable to reconfigure the new transport channel.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE reverts to the old configuration and transmits this message.

Specific Message Contents

TRNSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	Physical channel failure
Other information element	Not checked

8.2.4.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, and it shall set the value "physical channel failure" in IE" failure cause".

8.2.4.4 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.4.4.1 Definition

8.2.4.4.2 Conformance requirement

This procedure is used to failure of reconfiguration for a transport channel because of physical channel failure and reversion failure for the transition from CELL_FACH to CELL_FACH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot reconfigure the new transport channel due to a failure of L1 configuration, and subsequently fail to revert to the old configuration after T312 expiry.

8.2.4.4.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. SS begins to broadcast the BCCH of cell 2 using a power level lower than that applied for cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE. The message specifies a new set of transport channel parameters but the SS does not reconfigure L1 correspondingly. At the same time, SS deletes its current contexts for cell 1. As a result, the UE cannot reconfigure the new transport channel and shall attempt to revert to the old configuration. The UE shall find the presence of cell 2 and then transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel assigned. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	SS begins to transmit the BCCH for cell 2,
2		←	TRANSPORT CHANNEL RECONFIGURATION	Specifies the use of a new setting for transport channel.
3				The SS does not reconfigure L1 and deletes the old configuration present in cell 1.
4				The UE fails to reconfigure a new transport channel.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE detects the presence of cell.2, and then transmits this message which includes the IE"U-RNTI".
6		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.4.4.5 Test requirement

After step4 the UE shall discover cell 2, enter CELL_FACH state, and then transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step7 the UE shall successfully re-establish an RRC connection in cell 2.

8.2.4.5 Transport Channel Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.5.1 Definition

8.2.4.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message, before the UE completes the configuration of the transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received earlier. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.5.3 Test purpose

To confirm that the UE keeps its current configuration, transmits an RRC STATUS message when it receives another TRANSPORT CHANNEL RECONFIGURATION message before the completion of an earlier reconfiguration request.

8.2.4.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before the UE has successfully configured the transport channel specified in an earlier message, the UE keeps the old configuration. After that, the UE shall transmit an RRC STATUS message on the DCCH using AM RLC, indicating "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Including IE"Uplink DPCH info"
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the time specified in IE"Activation Time Info" of message in step 1 has elapsed.
3		→	RRC STATUS	The UE shall not change the configuration.

Specific Message Contents

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	"RRC STATUS"
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.4.5.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC, stating the reason "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.4.6 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception)

8.2.4.6.1 Definition

8.2.4.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which makes use of a spare value in the mandatory IE" DRX indicator". Then it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message with the value "protocol error" set in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.6.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received TRANSPORT CHANNEL RECONFIGURATION message comprises a spare value in the mandatory IE" DRX indicator".

8.2.4.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes a spare value in the mandatory IE "DRX indicator". The UE shall keep the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying "protocol error" in IE "failure cause" and also indicating "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains an illegal value for a mandatory IE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The message shall specify "protocol error" in IE "failure cause" and set value "Information element value not comprehended" in IE "Protocol error cause".

8.2.4.7 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Success

8.2.4.7.1 Definition

8.2.4.7.2 Conformance requirement

The UE shall correctly reconfigure the transport channels according to TRANSPORT CHANNEL RECONFIGURATION message, after it is requested to perform a transition from CELL_DCH to CELL_FACH in the same cell in conjunction with the transport channel reconfiguration.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.7.3 Test purpose

To confirm that the UE reconfigures a new Transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits TRANSPORT CHANNEL RECONFIGURATION message to the UE which omits IE" Uplink DPCH info" and IE" Downlink DPCH info" . This should cause the UE to perform a state transition from CELL_DCH to CELL_FACH in the same cell. The UE then reconfigures the new transport channel according to this message and reconfigure the new physical channel according to the system information messages. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	IE"Uplink DPCH Info" and IE"Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration of transport channel
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.4.7.5 Test requirement

After step3 the UE shall transit from CELL_DCH to CELL_FACH in the same cell, and then continue to communicate with SS on the new transport channel and common physical channels.

8.2.4.8 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Unsupported configuration)

8.2.4.8.1 Definition

8.2.4.8.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.8.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received TRANSPORT CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.4.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including an unsupported transport channel configuration for the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements -Uplink transport Channels >Added or Reconfigured TrCH information list	Number of transport blocks = 4096
-Downlink transport Channels >Added or Reconfigured TrCH information list	Number of transport blocks = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.4.8.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, which shall contains cause "configuration unacceptable" in IE" failure cause".

8.2.4.9 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Physical channel failure and reversion to old configuration)

8.2.4.9.1 Definition

8.2.4.9.2 Conformance requirement

The UE shall revert the old configuration when it fails to reconfigure the new transport channel requested. When reversion is successful, it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message to UTRAN.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.9.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new transport channel according to the TRANSPORT CHANNEL RECONFIGURATION message received.

8.2.4.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE which includes the new transport channel parameters. However, it does not reconfigure the new transport channel to reflect change. As a result, the UE should encounter difficulties in

the reconfigure process and after T312 expiry, it shall revert to its stored old configuration. When the UE manages to return to the old configuration, it transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC and set the reason "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	
2				The SS does not reconfigure the transport channel hence the UE could not access the new transport channel.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	After T312 expiry, the UE reverts to the old configuration and transmits this message using the original transport channel settings.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	TRANSPORT CHANNEL RECONFIGURATION FAILURE
Failure cause	Physical channel failure
Other information element	Not checked

8.2.4.9.5 Test requirement

After step2 the UE shall attempt revert to the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The failure message shall contain the reason "physical channel failure" in IE" failure cause".

8.2.4.10 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Physical channel failure and reversion failure)

8.2.4.10.1 Definition

8.2.4.10.2 Conformance requirement

The UE shall initiate a RRC connection re-establishment procedure, after it encounters a physical channel failure followed by an inability to revert to the old transport channel configuration.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.10.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE fails successively in the following actions: (a) configure the new transport channel according to TRANSPORT CHANNEL RECONFIGURATION message received and (b) revert to the old channel configuration after timer T312 expiry.

8.2.4.10.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. SS begins to transmit the BCCH for cell 2. The SS then transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which specifies the new transport channel parameters on common physical channel. But the SS does not reconfigure the L1 parameters and the new transport channel to reflect this change. Consequently, the UE discovers that it

cannot reconfigure the new transport channel and try to revert to the old configuration. At this time, SS deletes all context related to the old configuration in cell 1. Then the UE should find cell 2 and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH. After the reception of such a message, the SS transmits an RRC CONNECTION RE-ESTABLISHMENT message and includes a new TFCS for the new transport channel in cell 2. After receiving this message, the UE reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit the BCCH cell 2.
2		←	TRANSPORT CHANNEL RECONGURATION	
3				The SS does not reconfigure L1. At the same time, it deletes the old channel configuration.
4				The UE fails to reconfigure a new transport channel.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall discover the presence of cell 2 and transmits this message, which includes the IE"U-RNTI".
6		←	RRC CONNECTION RE-ESTABLISHMENT	A new TFCS is commanded according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.4.10.5 Test requirement

After step4 the UE shall find cell 2, enter CELL_FACH state and then initiate RRC connection re-establishment procedure in cell 2.

After step7 the UE shall successfully re-establish an RRC connection in cell 2.

8.2.4.11 Transport Channel Reconfiguration from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.11.1 Definition

8.2.4.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message before the UE configures the transport channel, according to an earlier TRANSPORT CHANNEL RECONFIGURATION message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC which specifies "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.11.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message, before the UE had completed the configuration of the transport channel originating from an earlier TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to request for a reconfiguration of the transport channel, leading to a state transition to CELL_FACH. However, before the completion of this process, SS sends a second TRANSPORT CHANNEL RECONFIGURATION message. The UE shall keep the old configuration as if no reconfiguration has occurred and then transmit an RRC STATUS message on the DCCH using AM RLC. The status message shall indicate "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	IE "Activation Time Info" is included
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the activation time requested in step 1 has passed.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	"RRC STATUS"
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.4.11.5 Test requirement

After step2 the UE shall keep its configuration and then transmit an RRC STATUS message on the DCCH using AM RLC, containing the reason "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.4.12 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.4.12.1 Definition

8.2.4.12.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which makes use of a spare value in the mandatory IE" DRX indicator". Then it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message, setting the value "protocol error" in IE" failure cause" and also setting "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.12.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives a TRANSPORT CHANNEL RECONFIGURATION message which uses a spare value in the mandatory IE" DRX indicator".

8.2.4.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, and includes a spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The message shall specify "protocol error" in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains a mandatory IE error.
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	" TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.12.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The UE shall set "protocol error" in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

8.2.4.13 Transport channel reconfiguration from CELL_FACH to CELL_DCH : Success

8.2.4.13.1 Definition

8.2.4.13.2 Conformance requirement

The UE shall correctly reconfigure the transport channels according to TRANSPORT CHANNEL RECONFIGURATION message, which trigger a state transition from CELL_FACH to CELL_DCH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.13.3 Test purpose

To confirm that the UE reconfigures a new transport channel using dedicated physical channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes IE" Uplink DPCH info" and IE" Downlink DPCH info" leading to a state transition from CELL_FACH to CELL_DCH in the same cell. The UE shall reconfigure the new transport channel according to this message and then reconfigure the new physical channel according to the system information message. Finally, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Includes both IE"Uplink DPCH Info" and IE"Downlink DPCH Info" in the message.
2				Reconfiguration of transport channel
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.4.13.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_DCH in the same cell, and continue to communicate with SS using the new transport channel configuration based on DPCH physical channels.

8.2.4.14 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.4.14.1 Definition

8.2.4.14.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.14.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC when it receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters.

8.2.4.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	The message includes unsupported configuration by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements -Uplink transport Channels -Added or Reconfigured TrCH information list	Number of transport channels = 4096
-Downlink transport Channels -Added or Reconfigured TrCH information list	Number of transport channels = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.4.14.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The UE shall set "configuration unacceptable" in IE" failure cause" of the message.

8.2.4.15 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old channel)

8.2.4.15.1 Definition

8.2.4.15.2 Conformance requirement

The UE shall revert to the old configuration when the UE has failed to reconfigure the new transport channel requested, and then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message to UTRAN.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.15.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.15.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_DCH state. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes the new transport channel parameters. However, SS does not reconfigure the new transport channel accordingly. Hence, the UE shall experience a failure in the reconfiguration process. After T312 expiry, the UE shall revert to the old channel configuration. Then the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Message includes IE"Downlink DPCH Info" and IE"Uplink DPCH Info"
2				SS does not reconfigure the transport channel causing the UE to detect a physical channel failure.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	After T312 expiry the UE shall revert to the old configuration and transmit this message.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	TRANSPORT CHANNEL RECONFIGURATION FAILURE
Failure cause	Physical channel failure
Other information element	Not checked

8.2.4.15.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE" failure cause".

8.2.4.16 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.4.16.1 Definition

8.2.4.16.2 Conformance requirement

The UE shall initiate a RRC re-establishment procedure when it fails to revert to the old channel configuration, following a physical channel failure in the transport channel reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.16.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure, when the UE cannot reconfigure the new transport channel for the failure of L1 configuration and subsequently fails to revert to the old configuration after T312 expiry.

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in a cell 1. SS begins to broadcast the BCCH of cell 2 at a power level lower than in cell 1, and then it transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE in cell 1. The message includes a new set of transport channel parameters. However, the SS does not reconfigure L1 and the new transport channel accordingly. At the same time, it deletes the current channel configurations in cell 1. As a result, the UE cannot reconfigure the new transport channel and an attempt to revert to the old configuration fails. The UE shall then find that cell 2 is available, camp onto it, and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message. This message shall include the IE"U-RNTI" on the uplink CCCH. When the SS receives this message, it transmits an RRC CONNECTION RE-ESTABLISHMENT message, which specifies a new TFCS according to the new transport channel used. After the UE receives this message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit BCCH in cell 2
2		←	TRANSPORT CHANNEL RECONGURATION	
3				The SS does not reconfigure L1 and transport channel, it also deletes its current contexts for cell 1.
4				The UE shall experience a failure to reconfigure a new transport channel and also fails to revert to old configuration.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell 2, camp onto it, and then transmits this message which includes the IE"U-RNTI".
6		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

After step4 the UE shall find the presence of cell 2, enter CELL_FACH state, and transmit RRC RE-ESTABLISHMENT REQUEST message to attempt to setup the RRC connection in cell 2.

After step7 the UE shall successfully re-establish the RRC connection in cell 2.

Transport Channel Reconfiguration from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

The UE shall keep its old configuration when it receives another TRANSPORT CHANNEL RECONFIGURATION message before it can configure the transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received earlier. The UE shall transmit an RRC STATUS

message on the DCCH using AM RLC, setting "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.17.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when it receives another TRANSPORT CHANNEL RECONFIGURATION message before the completion of an earlier request for transport channel reconfiguration.

8.2.4.17.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before it has successfully configured the transport channel based on an earlier request. It shall respond by keeping the old configuration and then transmitting an RRC STATUS message on the DCCH using AM RLC. The content of the failure message shall indicate "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Includes the IE"Uplink DPCH info"
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the elapse of the activation time specified in step 1.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	"RRC STATUS"
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.4.18.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC, setting the value to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.4.18 Transport channel reconfiguration from CELL_FACH to CELL_DCH:Failure (Invalid message reception)

8.2.4.18.1 Definition

8.2.4.18.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes a spare value in the mandatory IE" DRX indicator". The UE shall then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message, specifying

“protocol error” in IE” failure cause” and also “Information element value not comprehended” in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.18.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if it receives a TRANSPORT CHANNEL RECONFIGURATION message which uses a spare value in the mandatory IE” DRX indicator”.

8.2.4.18.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes a spare value in the mandatory IE” DRX indicator”. The UE shall keep the old configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall contain the value “protocol error” in IE” failure cause” and also “Information element value not comprehended” in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains a error in one of the mandatory IE in the message.
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“ TRANSPORT CHANNEL RECONFIGURATION FAILURE”
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.18.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The content of the message shall specify “protocol error” in IE” failure cause” and also “Information element value not comprehended” in IE” Protocol error cause”.

8.2.4.19 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Success with no transport channel type switching

8.2.4.19.1 Definition

8.2.4.19.2 Conformance requirement

The UE shall remain in CELL_FACH state and transition from CELL_FACH to CELL_FACH in the another cell requested in the received TRANSPORT CHANNEL RECONFIGURATION message.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.19.3 Test purpose

To confirm that the UE reconfigures a new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.19.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new transport channel parameters for Hand Over. The UE reconfigures the new transport channel and transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to broadcast the BCCH in cell 2.
2		←	TRANSPORT CHANNEL RECONGURATION	Including Primary CPICH Info
3				Reconfiguration of a new transport channel
4		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None

8.2.4.19.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_FACH in the another cell and continue to communicate with the SS on the DCCH using the existing transport channel.

8.2.4.20 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Failure (Unsupported configuration)

8.2.4.20.1 Definition

8.2.4.20.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.20.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received TRANSPORT CHANNEL RECONFIGURATION message specifies unsupported configuration parameters.

8.2.4.20.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters of the UE. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the event "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including unsupported configuration by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the settings used by the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements -Uplink transport Channels -Added or Reconfigured TrCH information list -Downlink transport Channels -Added or Reconfigured TrCH information list	Number of Transport blocks = 4096 Selected value as the UE can not support. Number of Transport blocks = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.4.20.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "configuration unacceptable" in IE" failure cause".

8.2.4.21 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Failure (Physical channel failure)

8.2.4.21.1 Definition

8.2.4.21.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a TRANSPORT CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.21.3 Test purpose

To confirm that the UE perform a cell reselection and cell update procedure when the it fail to access the assigned physical channel, according to a TRANSPORT CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

8.2.4.21.4 Method of test

Initial Condition

System Simulator : 3 cells Cell 1 is active, Cell 2 is inactive, Cell 3 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a TRANSPORT CHANNEL RECONFIGURATION message, resulting in the UE to attempt to transit from CELL_FACH in cell 1 to CELL_FACH in cell 3. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 3. After the UE successfully camp onto cell 2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
<u>1</u>		<u>←</u>	<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
~~1~~ 2		←	TRANSPORT CHANNEL RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_FACH in cell 1 to CELL_FACH in cell 3
<u>2</u>			<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_PCH state.

Specific Message Contents

None

8.2.4.21.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.4.22 Transport Channel Reconfiguration from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.22.1 Definition

8.2.4.22.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message, before the UE completes the configuration of the transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received earlier. The UE shall

transmit an RRC STATUS message on the DCCH using AM RLC which is set to “Message not compatible with receiver state” in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.22.3 Test purpose

To confirm that the UE keeps its current configuration, transmits an RRC STATUS message when it receives another TRANSPORT CHANNEL RECONFIGURATION message before the completion of an earlier reconfiguration request.

8.2.4.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before the UE has successfully configured the transport channel specified in an earlier message, the UE keeps the old configuration. After that, the UE shall transmit an RRC STATUS message on the DCCH using AM RLC, indicating “Message not compatible with receiver state” in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Including IE”Uplink DPCH info”
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the time specified in IE”Activation Time Info” of message in step 1 has elapsed.
3		→	RRC STATUS	The UE shall not change the configuration.

Specific Message Contents

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	“RRC STATUS”
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.4.22.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS message on the DCCH using AM RLC, stating the reason “Message not compatible with receiver state” in IE” Protocol error cause”.

8.2.4.23 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.4.23.1 Definition

8.2.4.23.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which makes use of a spare value in the mandatory IE” DRX indicator”.

Then it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message with the value “protocol error” set in IE” failure cause” and also “Information element value not comprehended” in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.23.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received TRANSPORT CHANNEL RECONFIGURATION message comprises a spare value in the mandatory IE” DRX indicator”.

8.2.4.23.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes a spare value in the mandatory IE” DRX indicator”. The UE shall keep the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying “protocol error” in IE” failure cause” and also indicating “Information element value not comprehended” in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains an illegal value for a mandatory IE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“ TRANSPORT CHANNEL RECONFIGURATION FAILURE”
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.23.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The message shall specify “protocol error” in IE” failure cause” and set value “Information element value not comprehended” in IE” Protocol error cause”.

8.2.5 Transport format combination control

8.2.5.1 Transport format combination control in CELL_DCH : restriction

8.2.5.1.1 Definition

8.2.5.1.2 Conformance requirement

The UE shall change the subset of allowed transport format combination of uplink when the UE receives TRANSPORT FORMAT COMBINATION CONTROL message.

Reference

3GPP TS 25.331 clause 8.2.5

8.2.5.1.3 Test purpose

To confirm that the UE do not transmit data on the DTCH in the uplink direction, following the reception of TRANSPORT FORMAT COMBINATION CONTROL message sent from the SS, which is set to “zero” in IE” Minimum allowed Transport format combination index”.

8.2.5.1.4 Method of test

Initial Condition

System Simulator : 1cell

UE :CELL_DCH

Test Procedure

The UE establishes a radio access bearer on the DCH for a communication. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message, which indicates that only TFC₀ is allowed on the uplink for DCH transport channel. The UE shall reconfigure the TFCS, stop any transmission on DTCH logical channel and then continues the communication on DCCH only.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE s in CELL_DCH state with a DTCH logical channel allocated for communication between UE and SS
2		←	TRANSPORT FORMAT COMBINATION CONTROL	Set to “zero” in IE” Minimum allowed Transport format combination index”.
3				The UE shall <u>not</u> transmit any data on the DTCH.

Specific Message Contents

TRANSPORT FORMAT COMBINATION CNTROL

Information Element	Value/remark
TrCH information elements -Minimum allowed Transport format combination index	Set to “zero”

8.2.5.1.5 Test requirement

After step2 the UE shall stop transmitting data on the DTCH in the uplink.

8.2.5.2 Transport format combination control in CELL_DCH: release a restriction

8.2.5.2.1 Definition

8.2.5.2.2 Conformance requirement

The UE shall change the subset of allowed transport format combination of uplink when it receives TRANSPORT FORMAT COMBINATION CONTROL message, specifying that an existing restriction for the usage of TFCS be removed.

Reference

GPP TS 25.331 clause 8.2.5

8.2.5.2.3 Test purpose

To confirm that the UE resume transmission of data on the DTCH on the uplink, following the reception of TRANSPORT FORMAT COMBINATION CONTROL message which is set to "one" as the prior used transport format combination number in IE" Minimum allowed Transport format combination index".

8.2.5.2.4 Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_DCH with DTCH allocated but fully restricted.

Test Procedure

The UE is in CELL_DCH state with DTCH allocated but fully restricted. The UE cannot transmit the data on the DTCH, as a result of the restriction on the transport format combination. Next, the SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message which is set to "one" in IE" Minimum allowed Transport format combination index"

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				No data transmission on the DTCH with a restriction in the uplink direction, following the execution of test 8.1.2.5.1.
2		←	TRANSPORT FORMAT COMBINATION CONTROL	Set to "one" IE" Minimum allowed Transport format combination index".
3				The UE begins to transmit the data on the DTCH.

Specific Message Contents

TRANSPORT FORMAT COMBINATION CNTROL

Information Element	Value/remark
TrCH information elements -Minimum allowed Transport format combination index	Set to "one"

8.2.5.2.5 Test requirement

After step2 the UE shall begin to transmit the data on the DTCH in the uplink.

8.2.5.3 Transport format combination control in CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.5.3.1 Definition

8.2.5.3.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT FORMAT COMBINATION CONTROL message before the UE reconfigures the transport channel completely according to a similar message received earlier. The UE shall transmit an TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC indicating "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.5

8.2.5.3.3 Test purpose

To confirm that after the UE receives s TRANSPORT FORMAT COMBINATION CONTROL message, it transmits TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and keep the TFC subset as before the TRANSPORT FORMAT COMBINATION CONTROL message is received.

8.2.5.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH

Test Procedure

The UE establishes a radio access bearer on the DCH for to be used for user-data exchange. SS sends a TRANSPORT CHANNEL RECONFIGURATION message on the downlink DCCH, to request that the channel coding scheme for a DCH be changed. After this message has been acknowledged by the UE RLC-AM entity, the SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message, which includes a full restriction of the TFCS used in the uplink. The UE cannot shall detect a failure to reconfigures the TFCS, then the UE it transmits TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the uplink DCCH and continues the communication. After the activation time specified in the TRANSPORT CHANNEL RECONFIGURATION message has elapsed, the UE shall send TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH. SS verifies that reconfiguration is completed by checking that the user-data exchange is resumed on DTCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in CELL_DCH connected state, <u>W</u> with a DTCH logical channel for user-data communication
2		←	TRANSPORT CHANNEL RECONFIGURATION	Requesting for a change in semi-static transport format for DCH carrying the DTCH. The dynamic part remains unchanged.
3		←	TRANSPORT FORMAT COMBINATION CONTROL	Requesting for a full restriction on TFCS for the DCH carrying DTCH.
4		→	TRANSPORT FORMAT COMBINATION CONTROL FAILURE	The UE shall keep the TFC subset as before the TRANSPORT FORMAT COMBINATION CONTROL message was received
5				The UE does not change the configuration of TFC and the UE continues reconfigure the <u>affected</u> transport channel. <u>DTCH</u>
6			TRANSPORT CHANNEL RECONFIGURATION COMPLETE	UE shall resume exchange of data over the DTCH logical channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements - Uplink transport channels - Added or reconfigured TrCH information list - Transport channel identity - Semi-Static Transport Format Information - Type of channel coding	2 Select a different coding scheme from default message content

TRANSPORT FORMAT COMBINATION CONTROL

Information Element	Value/remark
DPCH TFCS in Uplink - Subset Representation - Allowed TFIs	Restricted TrCH information Not Present (All TFCs are restricted)

TRANSPORT FORMAT COMBINATION CONTROL FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT FORMAT COMBINATION CNTROL FAILURE"
Failure cause	Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.5.3.5 Test requirement

After step3 the UE continue the transport channel reconfiguration as if no TRANSPORT FORMAT COMBINATION CONTROL message was received. Then it shall transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC, stating the reason "Incompatible simultaneous reconfiguration" in IE" Failure cause".

After step6 the UE shall resume communication with SS on DTCH using the requested channel coding scheme on the transport blocks.

8.2.5.4 Transport format combination control in CELL_DCH: Failure (Invalid message reception)

8.2.5.4.1 Definition

8.2.5.4.2 Conformance requirement

The UE shall keep old configuration when it receives a TRANSPORT FORMAT COMBINATION CONTROL message which using a spare value in the mandatory IE"Minimum allowed Transport format combination index". It shall then transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message, indicating "protocol error" in IE" failure cause" and "Information element value not comprehended" in IE" Protocol error cause".

Reference

GPP TS 25.331 clause 8.2.5

8.2.5.4.3 Test purpose

To confirm after the UE receives an invalid TRANSPORT FORMAT COMBINATION CONTROL message, it transmits TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and keep the TFC subset as if no TRANSPORT FORMAT COMBINATION CONTROL message has been received.

8.2.5.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH

Test Procedure

The UE establishes a radio access bearer on the DCH for a communication. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message, which uses a spare value in the mandatory .IE"Minimum allowed Transport format combination index". The UE shall then transmit TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and continues the communication using the radio access bearer.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on the DTCH for a communication
2		←	TRANSPORT FORMAT COMBINATION CONTROL	Contains an error in a mandatory IE.
3		→	TRANSPORT FORMAT COMBINATION CONTROL FAILURE	The UE shall not change the configuration

Specific Message Contents

TRANSPORT FORMAT COMBINATION CONTROL

Information Element	Value/remark
DPCH TFCS in uplink - Minimum allowed Transport format combination index	Set to the value "MaxTFCValue"

TRANSPORT FORMAT COMBINATION CNTROL FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT FORMAT COMBINATION CNTROL FAILURE"
Failure cause	"protocol error"
Protocol error information -Protocol error case	Information element value not comprehended
Other information element	Not checked

8.2.5.4.5 Test requirement

After step3 the UE shall keep its configuration before the TRANSPORT FORMAT COMBINATION CONTROL message was received and transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC. The UE shall set the value "protocol error" in IE" Failure cause" and the value "information element not comprehended" in IE"protocol error information". The UE shall continue communicate with SS using the radio access bearer.

8.2.6 Physical channel reconfiguration

8.2.6.1 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Success

8.2.6.1.1 Definition

8.2.6.1.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message received, which is used for hard handover purposes. It shall be able to communicate with the UTRAN on the new frequency subsequently.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.1.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message received from the SS.

8.2.6.1.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes a new physical channel parameter specified as the changing of frequency. The UE reconfigures the new physical channel and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Including a new frequency information
2				Reconfiguration of physical channel
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.1.5 Test requirement

After step3 the UE shall continue to communicate with SS on the new physical channel.

8.2.6.2 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Unsupported configuration)

8.2.6.2.1 Definition

8.2.6.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message which includes an unsupported configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.2.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters for the UE.

8.2.6.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes unsupported configuration parameters as the frequency cannot be supported by the UE. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Includes an unsupported configuration as the frequency cannot be supported by the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the physical channel and continue to communicate using the old configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.6.2.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC and set "configuration unacceptable" in IE" failure cause".

8.2.6.3 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Physical channel failure and reversion to old channel)

8.2.6.3.1 Definition

8.2.6.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by the expiry of timer T312, and then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to the received PHYSICAL CHANNEL RECONFIGURATION message by timer T312 expiry.

8.2.6.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes new frequency parameters. However, the SS does not reconfigure the

new physical channel. The UE is expected to encounter a failure to reconfigure the new physical channel and after T312 timer expiry the UE shall revert to the old configuration. Finally, the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC specifies “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Including a new frequency information
2				The SS does not reconfigure the physical channel so that the UE fails to reconfigure to the new physical channel.
3		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expiry, the UE shall revert to the old configuration and transmits this message.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.6.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value “physical channel failure” in IE” failure cause”.

8.2.6.4 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Physical channel failure and reversion failure)

8.2.6.4.1 Definition

8.2.6.4.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration, after the detection of physical channel failure during the course of executing a physical channel reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot reconfigure the new physical channel for the failure of L1 configuration and for the failure of the reversion to the old configuration.

8.2.6.4.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive
UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes new uplink and downlink frequency parameters and does not reconfigure L1. The UE is expected to fail to reconfigure the new physical channel and tries to revert to the old configuration after T312 expiry. The SS then deletes

the old physical channel so that the UE would perform cell reselection and finds cell 2. It shall then transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS transmits the BCCH in cell 2.
2		←	PHYSICAL CHANNEL RECONFIGURATION	The message includes new frequency information
3				SS does not reconfigure the physical channel to reflect the changes in step 2, at the same time, it deletes the old configuration so the UE cannot reconfigure the new physical channel and cannot revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds a new cell.2 and then transmits this message which includes the IE"U-RNTI" .
5		←	RRC CONNECTION RE-ESTABLISHMENT	This message indicates a new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None.

8.2.6.4.5 Test requirement

After step3 the UE shall find the availability of cell 2, enter CELL_FACH state, and transmits RRC CONNECTION RE-ESTABLISHMENT message using RLC-TM mode on the uplink DCCH.

After step6 the UE shall be able to successfully re-establish an RRC connection in cell 2.

8.2.6.5 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Incompatible simultaneous reconfiguration)

8.2.6.5.1 Definition

8.2.6.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another PHYSICAL CHANNEL RECONFIGURATION message before it completes the current reconfiguration according to an earlier PHYSICAL CHANNEL RECONFIGURATION message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC, setting "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.5.3 Test purpose

To confirm that the UE keeps its current configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the completion of an existing physical channel reconfiguration .

8.2.6.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before it reconfigures the physical channel, the UE keeps the old configuration and transmits an RRC STATUS message on the DCCH using AM RLC. This message shall indicate "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the "Activation Time Info" specified in the message in step 1 has elapsed.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.6.5.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an RRC STATUS message on the DCCH using AM RLC, which shall be set to "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.6.6 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Invalid message reception)

8.2.6.6.1 Definition

8.2.6.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message, which includes the spare value in the mandatory IE" DRX indicator". It shall then transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message which contains the value "protocol error" in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.6.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives a PHYSICAL CHANNEL RECONFIGURATION message which uses a spare value in the mandatory IE" DRX indicator".

8.2.6.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE , with a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with a value "protocol error" in IE" failure cause" and also a value "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	This message contains an error in one of the mandatory IEs.
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting value "protocol error" in IE" failure cause" and also setting value "Information element value not comprehended" in IE" Protocol error cause".

8.2.6.7 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Success

8.2.6.7.1 Definition

8.2.6.7.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message when asked to perform a transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.7.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message received from the SS.

8.2.6.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE. The UE shall then reconfigure the new physical channel according to this message. Following this, it shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the RACH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2				Reconfiguration of physical channel
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.7.5 Test requirement

After step3 the UE shall transit from CELL_DCH to CELL_FACH and continue to communicate with SS on the common physical channel.

8.2.6.8 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Unsupported configuration)

8.2.6.8.1 Definition

8.2.6.8.2 Conformance requirement

The UE shall keep its old configuration when it receives a PHYSICAL CHANNEL RECONFIGURATION message which includes unsupported configuration parameters. It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason "configuration unacceptable" indicated in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.8.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.6.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters. Specifically, the frequency cannot be supported by the UE. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION

FAILURE message on the DCCH using AM RLC which and indicating “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message specifies the usage of an unsupported configuration for the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the physical channel and continue to communicate with the SS using the original configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.6.8.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason “configuration unacceptable” specified in IE” failure cause”.

8.2.6.9 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Physical channel failure)

8.2.6.9.1 Definition

8.2.6.9.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.9.3 Test purpose

To confirm that the UE perform a cell reselection and cell update procedure when the it fail to access the assigned physical channel, according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_DCH to CELL_FACH.

8.2.6.9.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a PHYSICAL CHANNEL RECONFIGURATION message, resulting in the UE to attempt to transit

from CELL_DCH to CELL_FACH. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 1. After the UE successfully camp onto cell 2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
<u>1</u>		←	<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
<u>2</u>		←	PHYSICAL CHANNEL RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_DCH to CELL_FACH
<u>3</u>			<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_PCH state.

Specific Message Contents

None

8.2.6.9.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.6.10 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.10.1 Definition

8.2.6.10.2 Conformance requirement

The UE shall keep its old configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the existing reconfiguration request has been completed. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC, indicating the reason "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.10.3 Test purpose

To confirm that the UE keeps its original configuration when the UE receives a second PHYSICAL CHANNEL RECONFIGURATION message before it reconfigures the physical channel according to an earlier PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.10.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the UE reconfigures the physical channel, the UE shall keep the old configuration and transmits an RRC STATUS message on the DCCH using AM RLC. This message shall specify value "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the time specified in "Activation Time Info" in the message of step 1.
3		→	RRC STATUS	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.6.10.5 Test requirement

After step2 the UE shall keep its old configuration, transmit an RRC STATUS message on the DCCH using AM RLC, and set the cause "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.6.11 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.6.11.1 Definition

8.2.6.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message which includes the spare value in the mandatory IE" DRX indicator" . It shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message, indicating "protocol error" in IE" failure cause" and indicating "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.11.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received a PHYSICAL CHANNEL RECONFIGURATION message uses a spare value in the mandatory IE" DRX indicator".

8.2.6.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which contains a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, which comprises the reason "protocol error" in IE" failure cause" and reason "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message contains a error in one of the mandatory IE.
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.11.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The failure message shall specify "protocol error" in IE" failure cause" and include "Information element value not comprehended" in IE" Protocol error cause".

8.2.6.12 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Success

8.2.6.12.1 Definition

8.2.6.12.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, which triggers a transition from CELL_FACH to CELL_DCH.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.12.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message received from the UTRAN, in the case of an assignment of dedicated physical resource from the common physical channels used previously by the UE.

8.2.6.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to start a transition from CELL_FACH to CELL_DCH. The UE shall reconfigure the new physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2				The UE shall reconfigure the physical channel in order to start using the dedicated channels allocated.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.12.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_DCH and continue to communicate with SS on the dedicated physical channel.

8.2.6.13 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.6.13.1 Definition

8.2.6.13.2 Conformance requirement

The UE shall keep its old configuration when the it receives a PHYSICAL CHANNEL RECONFIGURATION message, which specifies unsupported configuration parameters for the UE. It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the cause "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.13.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.6.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes unsupported frequencies for the UE. The PHYSICAL CHANNEL RECONFIGURATION is structured in such a manner as to trigger a transition from CELL_FACH to CELL_DCH in the UE. The UE shall responds with a PHYSICAL CHANNEL RECONFIGURATION FAILURE message sent on the DCCH using AM RLC, setting "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Includes unsupported frequencies for the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the physical channel configuration, this message shall be sent using the original allocated physical resource.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.6.13.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, the IE" failure cause" shall be set to "configuration unacceptable".

8.2.6.14 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.6.14.1 Definition

8.2.6.14.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by timer T312 expiry. It shall report the failure by transmitting a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.14.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message by the T312 expiry.

8.2.6.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, requesting it to transit from CELL_FACH to CELL_DCH due to a switch in physical resource reallocation. However, it does not reconfigure the new physical channel accordingly but continue

to use the old configuration. Consequently, the UE shall fail to reconfigure the new physical channel, and after T312 expiry the UE attempt to revert to the old configuration. Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which reports “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2				The SS does not reconfigure the physical channel, hence the UE shall detect a failure to reconfigure to the new physical channel.
3		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expiry the UE reverts to the old configuration and transmits this message.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.6.14.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying “physical channel failure” in IE” failure cause”.

8.2.6.15 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.6.15.1 Definition

8.2.6.15.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the physical channel reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.15.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure after it fails to reconfigure the new physical channel and experiences a subsequent failure to revert to the old configuration.

8.2.6.15.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, but it does not reconfigure L1 accordingly. This is expected to cause the UE to fail to reconfigure to the new physical channel. As a result, the UE shall try to revert to the old configuration after timer T312 expiry. However, the SS deletes the old physical channel before timer T312 has expired. Therefore, UE shall reselect to cell 2 and sends an RRC

CONNECTION RE-ESTABLISHMENT REQUEST message, which includes its previously assigned U-RNTI on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel used. After the UE receives this message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS begins to transmit the BCCH in a cell 2.
2		←	PHYSICAL CHANNEL RECONFIGURATION	
3				The SS does not reconfigure the physical channel and deletes the old configuration. As a result, UE should encounter a failure to reconfigure the new physical channel, then attempt to revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell 2 and then transmit this message with its U-RNTI included.
5		←	RRC CONNECTION RE-ESTABLISHMENT	This message specifies a new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	UE shall send this message in the cell 2.

Specific Message Contents

None.

8.2.6.15.5 Test requirement

After step3 the UE shall detect the presence of cell 2, camp onto it, and transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step6 the UE shall successfully re-establish the RRC connection in cell 2.

8.2.6.16 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.16.1 Definition

8.2.6.16.2 Conformance requirement

The UE shall keep its old configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the completion of an earlier physical channel reconfiguration procedure. Then the UE shall transmit an RRC STATUS message on the DCCH using AM RLC and indicate "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.16.3 Test purpose

To confirm that the UE keeps its old configuration, if receives another PHYSICAL CHANNEL RECONFIGURATION message before it manages to complete reconfiguring the physical channel according to an earlier PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.16.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to command the UE to perform a physical channel reconfiguration. The starting time for this action is specified. However, before the passing of the indicated starting time, SS sends another PHYSICAL CHANNEL RECONFIGURATION message. The UE shall stop the existing reconfiguration, maintains the old configuration, and transmits an RRC STATUS message on the DCCH using AM RLC indicating "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the frame number specified in IE"activation time info" of the message dispatched in step 1.
3		→	RRC STATUS	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.6.16.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an RRC STATUS message on the DCCH using AM RLC, setting the value "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.6.17 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.6.17.1 Definition

8.2.6.17.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message containing a spare value in the mandatory IE" DRX indicator". It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message, set "protocol error" in IE" failure cause" and also set "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.17.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received message uses a spare value in the mandatory IE" DRX indicator".

8.2.6.17.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which comprises a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE" failure cause" and also setting "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Contains a mandatory error due to illegal use of spare value
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.17.5 Test requirement

After step1 the UE shall keep its old configuration, transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with "protocol error" in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

8.2.6.18 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Success

8.2.6.18.1 Definition

8.2.6.18.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message when asked to perform a transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.18.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message received from the SS.

8.2.6.18.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS starts to broadcast the BCCH in cell 2 and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE. The UE shall then reconfigure the new physical channel according to this message. Following this, it shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the RACH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to broadcast the BCCH in cell 2.
2		←	PHYSICAL CHANNEL RECONFIGURATION	
3				Reconfiguration of physical channel
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.18.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_FACH in the another cell and continue to communicate with SS on the common physical channel.

8.2.6.19 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Unsupported configuration)

8.2.6.19.1 Definition

8.2.6.19.2 Conformance requirement

The UE shall keep its old configuration when it receives a PHYSICAL CHANNEL RECONFIGURATION message which includes unsupported configuration parameters. It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason "configuration unacceptable" indicated in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.19.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.6.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters. Specifically, the frequency cannot be supported by the UE. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which and indicating "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message specifies the usage of an unsupported configuration for the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the physical channel and continue to communicate with the SS using the original configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	63984 Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	Configuration unacceptable Not checked

8.2.6.19.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason “configuration unacceptable” specified in IE” failure cause”.

8.2.6.20 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Physical channel failure)

8.2.6.20.1 Definition

8.2.6.20.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.20.3 Test purpose

To confirm that the UE perform a cell reselection and cell update procedure when the it fail to access the assigned physical channel, according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

8.2.6.20.4 Method of test

Initial Condition

System Simulator : 3 cells Cell 1 is active, Cell 2 is inactive, Cell 3 is inactive
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a PHYSICAL CHANNEL RECONFIGURATION message, resulting in the UE to attempt to transit from CELL_FACH in cell 1 to CELL_FACH in cell 3. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 3. After the UE successfully camp onto cell

2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
<u>1</u>		←	<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
~~1~~ 2		←	PHYSICAL CHANNEL RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_FACH in cell 1 to CELL_FACH in cell 3
<u>2</u>			<u>BCCH</u>	<u>The SS starts to broadcast the BCCH in cell 2.</u>
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_ <u>P</u> FACH state.

Specific Message Contents

None

8.2.6.20.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.6.21 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.21.1 Definition

8.2.6.21.2 Conformance requirement

The UE shall keep its old configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the existing reconfiguration request has been completed. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC, indicating the reason "Message not compatible with receiver state" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.21.3 Test purpose

To confirm that the UE keeps its original configuration when the UE receives a second PHYSICAL CHANNEL RECONFIGURATION message before it reconfigures the physical channel according to an earlier PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.21.4 Method of test

Initial Condition

System Simulator : 1 cell
UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the UE reconfigures the physical channel, the UE shall keep the old configuration and transmits an RRC STATUS message on the DCCH using AM RLC. This message shall specify value "Message not compatible with receiver state" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the time specified in "Activation Time Info" in the message of step 1.
3		→	RRC STATUS	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Message not compatible with receiver state
Other information element	Not checked

8.2.6.21.5 Test requirement

After step2 the UE shall keep its old configuration, transmit an RRC STATUS message on the DCCH using AM RLC, and set the cause "Message not compatible with receiver state" in IE" Protocol error cause".

8.2.6.22 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.6.22.1 Definition

8.2.6.22.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message which includes the spare value in the mandatory IE" DRX indicator" . It shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message, indicating "protocol error" in IE" failure cause" and indicating "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.22.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received a PHYSICAL CHANNEL RECONFIGURATION message uses a spare value in the mandatory IE" DRX indicator".

8.2.6.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which contains a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, which comprises the reason "protocol error" in IE" failure cause" and reason "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message contains a error in one of the mandatory IE.
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.22.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The failure message shall specify "protocol error" in IE" failure cause" and include "Information element value not comprehended" in IE" Protocol error cause".

8.2.7 Physical Shared Channel Allocation[TDD only]

[Editor's note : This message is not included in Release99 so this is FFS.]

8.2.8 PUSCH capacity request[TDD only]

[Editor's note : This message is not included in Release99 so this is FFS.]

8.2.9 Downlink outer loop control

[For all following sub-clauses, all references to RRC CONNECTION SETUP messages shall use the default settings provided in clause 9 of TS 34.108, unless otherwise stated.](#)

8.2.9.1 Downlink outer loop control: Increase is Disallowed

8.2.9.1.1 Definition

8.2.9.1.2 Conformance requirement

The UE shall maintain its existing internal target SIR value after it has received DOWNLINK OUTER LOOP CONTROL message which forbids further adjustment of SIR target. This restriction shall be observed even if the UE has detect that the current SIR target is not sufficient to achieve the downlink quality demanded by the UTRAN.

Reference

3GPP TS 25.331 clause 8.2.9

8.2.9.1.3 Test purpose

To confirm that the UE keeps its target SIR value after it receives a DOWNLINK OUTER LOOP CONTROL message with the IE "Downlink Outer Loop Control" set to "TRUE".

8.2.9.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH state with the no restriction by the DL outer loop power control

Test Procedure

The UE is in the CELL_DCH state and the SS adjusts its transmission power as the current SIR estimation by the UE has reached the same target SIR value determined autonomously by the UE. This condition can be observed when the TPC command bits on the DPCCH physical channel has stabilized (consistently alternating between values 0 and 1). The SS transmits the DOWNLINK OUTER LOOP CONTROL message, which is set to "TRUE" in IE "Downlink Outer Loop Control". ~~When the SS generates some erroneous frames, this is expected to cause such that~~ the measured BLER in the UE ~~to fall~~ below the value specified in IE "BLER Quality Value" of the RRC CONNECTION SETUP message received ~~earlier during the mobile-terminated RRC connection establishment procedure (described in clause 7.1.2 of TS 34.108)~~. The UE shall detect this change but it maintains the current SIR target value and does not request that SS increases downlink transmission power by setting TPC in DPCCH to "1".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS adjusts its transmission power as such that the measured value of SIR in the UE is the same as the SIR target value determined by the UE. The target SIR value is chosen by the UE in order that the target BLER value requested by SS is achieved.
2		←	DOWNLINK OUTER LOOP CONTROL	Set value "TRUE" in IE "Downlink Outer Loop Control".
3				The SS starts to generate some error frames. The current SIR target in the UE cannot guarantee target BLER value specified earlier.
4				The UE shall keep the existing SIR target value and it shall not request that the DL transmission power be increased using TPC bits in DPCCH physical channel.

Specific Message Content

DOWNLINK OUTER POWER CONTROL

Information Element	Value/remark
Integrity check info	Not Present
Downlink Outer Loop Control	
- DL Outer loop control	Increased not allowed
Downlink DPCH power control information	
- DPC Mode	Single

8.2.9.1.5 Test requirement

After step3 the SS shall keep the target SIR value as same as step1 and it shall not request for the downlink transmission power be increased by setting TPC bits to "1".

8.2.9.2 Downlink outer loop control: Increase is Allowed

8.2.9.2.1 Definition

8.2.9.2.2 Conformance requirement

The downlink power control procedure is used to control the downlink outer loop power control running in the UE. If the UE receives the DOWNLINK OUTER LOOP CONTROL message with value "FALSE" in IE "Downlink Outer Loop Control", it shall remove any existing restriction of DL outer loop power control. The UE shall begin to increase its DL target SIR value and make the DL transmission power increase until the desired BLER value for the DPCH transport channel has been attained.

Reference

3GPP TS 25.331 clause 8.2.9

8.1.2.9.2.3 Test purpose

To confirm that the UE begins to exercise DL outer loop power control, in order to increase the target SIR value, after it had received a DOWNLINK OUTER LOOP CONTROL message specifying "FALSE" in IE "Downlink Outer Loop Control".

8.2.9.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH state with the restriction by the DL outer loop power control Test Procedure

The UE is in the CELL_DCH state with the restriction by the DL outer loop power control. The internal SIR target value determined by the UE is expected to be insufficient to allow the UE to achieve target BLER figure. The SS transmits the DOWNLINK OUTER LOOP CONTROL message, setting the value "FALSE" in IE "Downlink Outer Loop Control". Then the UE shall update its SIR target value and make the DL transmission power increase.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the same state as the end of step 4 in Clause 8.1.2.9.1.3.
2		←	DOWNLINK OUTER LOOP CONTROL	Set the value "FALSE" in IE "Downlink Outer Loop Control".
3				The UE shall begin to request that the DL transmission power be increased. This is done by setting the TPC field to "1" in DPCH.

8.2.9.2.5 Test requirement

After step3 the SS shall increase the DL transmission power more than step1.

8.2.9.3 Downlink outer loop control: Failure (Invalid message reception)

8.2.9.3.1 Definition

8.2.9.3.2 Conformance requirement

The UE shall correctly handle an erroneous DOWNLINK OUTER LOOP CONTROL message, and perform the appropriate error-handling procedure. Specifically, it shall not alter the downlink power control mechanism, which is currently being applied. It shall also transmit a RRC STATUS message using RLC-AM mode on the DCCH channel, state the appropriate failure cause.

Reference

3GPP TS 25.331 clause 8.2.9

8.2.9.3.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC when it receives a DOWNLINK OUTER LOOP CONTROL message, containing an invalid conditional IE with respect to the state of the UE.

8.2.9.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH and the integrity protection algorithm is not applied.

Test Procedure

-The UE is in CELL_DCH state. [Test steps 1 to 3 described in clause 8.2.9.1.4 are repeated.](#) Next, the SS transmits another DOWNLINK OUTER LOOP CONTROL message, removing the power increase restriction, and at the same time includes the conditional IE "Integrity Check Info". The UE shall not request for an increase in the downlink transmission power through the TPC command field in DPCCH. It shall transmit RRC STATUS message stating the value "Message extension not comprehended" in IE "protocol cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				Executes step 1 to step 3 in clause 8.2.9.1.4 .
2		←	DOWNLINK OUTER LOOP CONTROL	Contains an unexpected information element "Integrity Check Info" in the message. See specific message content.
3		→	RRC STATUS	The UE shall request for an increase in downlink transmission power. The message shall specify cause "Message extension is not comprehended" in IE "Protocol Error Information"
4				The UE shall not request for an increase in downlink transmission power. SS verifies the value of TPC field in DPCCH.

Specific Message Content

DOWNLINK OUTER LOOP CONTROL (Step [12](#))

The contents of DOWNLINK OUTER LOOP CONTROL message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Integrity Check Info	Present
- Message authentication code	An arbitrary 32-bits string
- RRC Message Sequence	An arbitrarily chosen integer from range (0....15)

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Information element value not comprehended
Other information element	Not checked

8.2.9.3.5 Test requirement

After step4 the UE shall keep its restriction for increase in downlink transmission power and not set TPC command fields in DPCCH to "1". It shall transmit an RRC STATUS message on the DCCH using AM RLC, indicating "Information element value not comprehended" in IE "Protocol error cause".

8.3 RRC connection mobility procedure

8.3.1 Cell Update

8.3.1.1 Cell Update: cell reselection in CELL_FACH

8.3.1.1.1 Definition

8.3.1.1.2 Conformance requirement

This procedure is used to update UTRAN with the current cell of the UE after it has performed a cell reselection in CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.1.3 Test purpose

To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active, Cell 2 is inactive

UE: CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state, camping onto cell 1. The SS starts to broadcast BCCH on the primary CPICH in cell 2 with a power level greater than that in cell 1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "DRX Indicator" set to "DRX with Cell updating", to the UE on the downlink DCCH. SS verifies that the UE does not send any response to this message. UE shall move to CELL_PCH state. SS then reverses the transmission power of cell 1 and cell 2. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with CELL UPDATE CONFIRM message and allocates new C-RNTI and U-RNTI identities to the UE. The IE "DRX Indicator" is set to "No DRX" in this message. The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. Following this, SS reverses the transmission power settings for cell 1 and cell 2 again. The UE shall initiate a cell update procedure by transmitting a CELL UPDATE message and stating the cause as 'cell re-selection'. SS replies with a CELL UPDATE CONFIRM message which contains IE "PRACH Info" and IE "Secondary CCPCH Info". The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge the assignment of the new physical resources.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2		←	BCCH	The SS starts to broadcast BCCH on the primary CPICH in cell 2 with a power level that is higher than that in cell 1. The UE shall find that the cell 2 is better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
3		→	CELL UPDATE	Value "cell reselection" should be indicated in IE" Cell update cause"
4		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "DRX with cell updating"
5				SS checks the uplink PRACH channel to verify that no response is sent by UE. SS reverses the transmission power level of cell 1 and cell 2.
6		→	CELL UPDATE	UE shall revert to normal service in cell 1 and set the cause to "cell reselection".
7		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "No DRX". New C-RNTI and U-RNTI identities are assigned to the UE.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_FACH state and sends this message.
9				SS reverses the transmission power level of cell 1 and cell 2.
10		→	CELL UPDATE	UE shall detect that cell 2 has become stronger.
11		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "No DRX". At the same time, IE"PRACH Info" and IE"Secondary CCPCH Info" are also indicated.
12		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_FACH state and sends this message on the new PRACH assigned in step 11.

Specific Message Contents

CELL UPDATE (Steps 3 and 6)

Use the same message sub-type found in Clause 8.1 of TS34.108.

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Cell Re-selection'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
DRX Indicator	DRX with cell updating

CELL UPDATE CONFIRM (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI	'0000 0000 0000 0001' An arbitrary 20-bits string which is different from original S-RNTI
New C-RNTI	An arbitrary 16-bits string which is different from original C-RNTI.

CELL UPDATE (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	Check to see if set to '0000 0000 0000 0001' Check to see if set to same string in IE"S-RNTI" in IE"New U-RNTI" of CELL UPDATE CONFIRM message in step 7.
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Cell Re-selection'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 11)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH) - Available Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub-Channel number - Sub-Channel number	0 and 1 Refer to the parameter set for TS 34.108 0 Refer to the parameter set for TS 34.108 0 and 1
Downlink DPCH info for one radio link - Primary CPICH Info - Primary Scrambling Code - PDSCH with SHO DCH Info - PDSCH code mapping - Secondary CCPCH Info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH Info - Secondary scrambling code - Channelization code - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing Offset	Set to the scrambling code for cell 1's P-CPICH. Not Present. Not Present. Not Present TRUE Not Present. Use default (Scrambling code of P-CPICH) 1 Not Present. Use default (Scrambling code of P-CPICH) FALSE 256 255 TRUE TRUE Flexible 0 chips

8.3.1.1.5 Test requirement

After step 2 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE" Cell update cause".

After step 4 the UE shall not transmit any uplink message in response to the CELL UPDATE CONFIRMATION message received in step 4.

After step 5 the UE shall send CELL UPDATE message to cell 2, in order to indicate that a cell reselection has taken place.

After step 7 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that it has started to use the new RNTI identities allocated.

After step 9 the UE shall send CELL UPDATE message to cell 1, in order to indicate that a cell reselection has taken place.

After step 11 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new PRACH physical channel assigned previously in CELL UPDATE CONFIRM message sent in step 11.

8.3.1.2 Cell Update: cell reselection in CELL_PCH

Definition

8.3.1.2.2 Conformance requirement

This procedure is to update UTRAN with information of the current cell, after a cell reselection has occurred in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.2.3 Test purpose

To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the successful reselection of another UTRA cell. To confirm that the UE replies with an appropriate uplink message after receiving CELL UPDATE CONFIRM message during the cell update procedure.

8.3.1.2.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active, Cell 2 is inactive

UE: CELL_PCH in cell 1

Test Procedure

The UE is brought to CELL_PCH state and is camped onto cell 1. The SS starts to broadcast system information on the BCCH on the primary CPICH in cell 2. The transmission level of cell 2 is raised to be higher than in cell 1. When the UE detects the presence of cell 2, it moves to CELL_FACH state and transmits a CELL UPDATE message on the uplink CCCH. The value "cell reselection" shall be set in IE "Cell update cause" in CELL UPDATE message. Upon reception of CELL_UPDATE message, the SS transmits a CELL UPDATE CONFIRM message which includes the IEs "PRACH info", "Secondary CCPCH info" to the UE on the downlink DCCH. In this message, the IE "DRX Indicator" is set to "No DRX". Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters CELL_FACH state. SS exchanges the transmission power of cell 1 and cell 2, so that cell 1 becomes the stronger cell. UE shall initiate a cell update procedure again by transmitting CELL UPDATE message. SS replies with a CELL UPDATE CONFIRM message with the IE "DRX Indicator" set to "DRX with cell updating". After receiving this message, the UE returns to CELL_PCH state without transmitting any uplink message. Finally, SS reverses the transmission strengths of cell 1 and cell 2 again. This will cause the UE to send CELL UPDATE message on the uplink PRACH of cell 2. SS then sends CELL UPDATE CONFIRM message with the assignment of new C-RNTI and U-RNTI identities. The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message as a response.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_PCH state in cell 1
2		←	BCCH	The SS starts to broadcast system information message on BCCH on the primary CPICH from cell 2. The transmission level of cell 2 is set to be higher than that in cell 1. The UE shall find that the cell 2 is better and attempt to perform a cell reselection.
3		→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "cell reselection"
4		←	CELL UPDATE CONFIRM	The message includes IEs" PRACH info", "Secondary CCPCH info" and set IE"DRX Indicator" to "No DRX".
5		→	PHYSICAL CHANNEL RECONFIGURATION CONFIRM	UE stays in CELL_FACH state.
6				SS swaps the transmission power of cell 1 and cell 2, making cell 1 the stronger cell.
7		→	CELL UPDATE	
8		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "DRX with cell updating".
9				UE moves to CELL_PCH state. SS exchanges the transmission power of cell 1 and cell 2.
10		→	CELL UPDATE	UE shall re-select to cell 2 and transmit this message.
11		←	CELL UPDATE CONFIRM	Includes IE"new U-RNTI" and IE"new C-RNTI"
12		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

CELL UPDATE (Steps 3, 7 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'Cell Re-selection'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 4)

Use the same message found in step 11 of Clause 8.1.3.1.1.3

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
DRX Indicator	DRX with cell updating

CELL UPDATE CONFIRM (Step 11)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI	'0000 0000 0000 0001' An arbitrary 20-bits string which is different from original S-RNTI
New C-RNTI	An arbitrary 16-bits string which is different from original C-RNTI.

8.3.1.2.5 Test requirement

After step 2 the UE shall reselect to cell 2 and transmit a CELL UPDATE message, containing the IE" Cell update cause" set to "cell reselection".

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 9 the UE shall detect that cell 2 has become the stronger cell. It shall send a CELL UPDATE message on cell 2' PRACH channel with the cause set to "cell reselection".

After step 11 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

8.3.1.3 Cell Update: periodical cell update in CELL_FACH

8.3.1.3.1 Definition

8.3.1.3.2 Conformance requirement

This procedure is to update UTRAN with the current cell information, after the UE has remained in the service area in the CELL_FACH state for a period exceeding the timer value T305.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.3.3 Test purpose

To confirm that the UE executes a periodic cell update procedure following the expiry of timer T305. To confirm that the UE sends a correct response to the CELL UPDATE CONFIRM message. To confirm that the UE listens to the system information messages and then responds to a change in the setting for timer T305.

8.3.1.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH

Test Procedure

The UE is in CELL_FACH state. When the UE detects the expiry of timer T305 according to the settings in system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH with a cause indicating periodic cell updating. SS replies with a CELL UPDATE CONFIRM message, omitting the IEs "new C-RNTI", "new U-RNTI", "PRACH Info" and "Secondary CCPCH Info". The IE"DRX Indicator", however, is specified and set to "No DRX". SS verifies that the UE does not transmit any uplink message. SS then waits for T305 to expire again. The UE shall send another CELL UPDATE message to report periodic cell updating. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI", "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS once again allows T305 timer to expire, the UE shall transmit CELL UPDATE message for the third time. The new U-RNTI shall be indicated in this message together with the correct updating cause. In this sequence, SS replies with a CELL UPDATE CONFIRM message containing new channel parameters in IEs "PRACH Info" and "Secondary CCPCH Info". The UE shall then send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message by using the newly allocated PRACH resources. Finally, the content of the SYSTEM INFORMATION BLOCK TYPE 2 is changed to disable periodic cell updating. SS then monitors the uplink DCCH for a period up to 120 minutes the ~~maximum possible value for timer T305 (720minutes)~~ and verifies that no CELL_UPDATE message is received. After

this, the SS changes the timer T305 value to 5 minutes. UE shall resume periodic cell updating procedure and transmit CELL_UPDATE message 5 minutes after this modification.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS waits until T305 has expired.
2		→	CELL UPDATE	IE "Cell update cause" shall be set to "Periodic cell updating"
3		←	CELL UPDATE CONFIRM	No RNTI identities are given. No information on PRACH and S-CCPCH are provided.
4				SS verifies that no uplink message is received from UE. SS waits for another period to allow T305 to expire.
5		→	CELL UPDATE	Which is set to "periodic cell update" in IE" Cell update cause" for the expiry of timer T305.
6		←	CELL UPDATE CONFIRM	Including IEs" new C-RNTI" , "new U-RNTI" and IE"DRX Indicator" is set to "No DRX"
7		→	RNTI REALLOCATION COMPLETE	
8				SS waits for a duration to allow timer T305 in the UE to expire.
9		→	CELL UPDATE	
10		←	CELL UPDATE CONFIRM	IEs "PRACH Info" and "Secondary CCPCH Info" are included.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
12		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 2	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents). It waits for ~~17~~ 20 minutes and checks that no CELL UPDATE message is transmitted on uplink PRACH channel.
13		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 2	SS modified the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents) again.
14		→	CELL UPDATE	UE shall transmit this message 5 minutes after step 13, with "cell update cause" set to "periodic cell updating"
15		←	CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 2 and 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE CONFIRM (Step 6 and 15)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI	Set to '0000 0000 0001' Set to an arbitrary string different from '0000 0000 0000 0000 0001'

CELL UPDATE (Step 9 and 14)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0000 0001' Check to see if set to same bit string as in IE"S-RNTI" in IE"U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6. Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	0 and 1
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	0 and 1
- Sub-Channel number	
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

MASTER INFORMATION BLOCK (Step 12)

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 2 (Step 12)

Information Element	Value/remark
UE Timers and constants in connected mode T305	No update <u>Infinity120</u>

MASTER INFORMATION BLOCK (Step 13)

Information Element	Value/remark
MIB Tag	1

SYSTEM INFORMATION BLOCK TYPE 2 (Step 13)

Information Element	Value/remark
UE Timers and constants in connected mode T305	5 minutes

8.3.1.3.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 then transmits a CELL UPDATE message setting value "periodic cell update" into IE" Cell update cause".

After step 3 the UE shall not send any uplink message as a response to CELL UPDATE CONFIRM message sent in step 3.

After step 4 the UE shall send CELL UPDATE message, specifying the cell updating cause to be "periodic cell update".

After step 6 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall send CELL UPDATE message, specifying the cell updating cause to be "periodic cell update".

After step 10 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using the PRACH radio resources allocated.

Between step 12 and step 13 the UE shall cease periodic cell updating activity and not transmit any CELL UPDATE messages.

After step 13 the UE shall transmit a CELL UPDATE message stating the cell update cause to be periodic updating, 5 minutes after the SS has modified the BCCH data.

8.3.1.4 Cell Update: periodical cell update in CELL_PCH

8.3.1.4.1

Definition

8.3.1.4.2 Conformance requirement

This procedure is to update UTRAN with the information of the current cell when the UE detects that it is still in the service area, while residing in the CELL_PCH state, after the expiry of timer T305.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.4.3 Test purpose

To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the expiry of timer T305.
To confirm that the UE sends an appropriate response message after receiving the CELL UPDATE CONFIRM message.

8.3.1.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE starts from CELL_PCH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE moves to CELL_FACH state. It shall transmit a CELL UPDATE message on the uplink CCCH and set the value "periodic cell update" into IE "Cell update cause". SS answers with a CELL UPDATE CONFIRM message, with IE "DRX Indicator" set to "No DRX". IEs related to RNTI, PRACH and S-CCPCH are omitted from this message. SS checks to confirm that the UE does not send a response. SS sends a RNTI REALLOCATION message to the UE, stating the new C-RNTI identity to be used and also setting IE "DRX Indicator" to "DRX with cell updating". The UE shall reply with RNTI REALLOCATION COMPLETE message and transit to CELL_PCH state. Next, SS stays idle until timer T305 is once again expired. The UE shall transmit CELL UPDATE message in order to initiate cell updating procedure. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI" and "new U-RNTI". Then the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH and before entering CELL_PCH state. In the next sequence, SS assigns a new U-RNTI identity to the UE by transmitting RNTI REALLOCATION message again. Once again, the IE "DRX Indicator" is set to "DRX with cell updating". After reception of this message, the UE moves to CELL_PCH state and start to listen to the paging sub-channels derived based on the value of new U-RNTI given. Finally, SS waits until T305 has expired once more, the UE shall send CELL UPDATE message again on uplink CCCH. SS replies with CELL UPDATE CONFIRM which includes IEs "PRACH Info" and "Secondary CCPCH Info". The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using PRACH indicated in CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS waits until T305 has expired.
2		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "periodic cell update".
3		←	CELL UPDATE CONFIRM	Does not include IEs "PRACH Info", "Secondary CCPCH Info", "new C-RNTI" or "new U-RNTI".
4				SS verifies that no response message is received.
5		←	RNTI REALLOCATION	Allocates a new C-RNTI identity to UE and set IE"DRX Indicator" to " DRX with Cell updating".
6		→	RNTI REALLOCATION COMPLETE	UE shall move to CELL_PCH state
7				SS remains idle for a period sufficient for T305 timer to expire.
8		→	CELL UPDATE	This message shall contain the new U-RNTI identity assigned in step 5.
9		←	CELL UPDATE CONFIRM	New C-RNTI and U-RNTI identities are assigned.
10		→	RNTI REALLOCATION COMPLETE	
11		←	RNTI REALLOCATION	SS assigns a new U-RNTI identity to the UE. At the same time, it sets IE"DRX Indicator" to "DRX with cell updating".
12		→	RNTI REALLOCATION COMPLETE	UE shall move to CELL_PCH state after sending this message.
13				SS waits for T305 to expire.
14			CELL UPDATE	
15			CELL UPDATE CONFIRM	Allocates new common physical resources by specifying IEs"PRACH Info" and "Secondary CCPCH Info".
16			PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

CELL UPDATE (Step 2)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Periodic cell updating'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108.
RNTI REALLOCATION (Step 5 and step 11)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI DRX Indicator	Set to '0000 0000 0001' Set to '0000 0000 0000 0000 1111' Set to '0000 0000 0000 1111' DRX with cell updating

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 9)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI	Set to '0000 0000 0001' Set to '0000 0000 0000 0000 1010' Set to '0000 0000 0000 0101'

CELL UPDATE (Step 14)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 15)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	0 and 1
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	
- Sub-Channel number	0 and 1
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

8.3.1.4.5 Test requirement

After step 2 the UE shall detect the expiry of timer T305, it shall then move to CELL_FACH state and transmits a CELL UPDATE message with the IE" Cell update cause" set to "periodic cell update".

After step 5 the UE shall reply with RNTI REALLOCATION COMPLETE message. It shall subsequently move to CELL_PCH state.

After step 7 the UE shall initiate a cell updating procedure by the transmission of a CELL UPDATE message. In this message, it shall indicate the new U-RNTI value assigned in step 5 and also set IE"Cell Updating Cause" to "Periodic Cell Updating".

After step 11 the UE shall reply with RNTI REALLOCATION COMPLETE message. It shall subsequently move to CELL_PCH state.

After step 13 the UE shall send a CELL UPDATE message. After step 15 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new PRACH channel assigned by the received CELL UPDATE CONFIRM message in step 15.

8.3.1.5 Cell Update: UL data transmission in URA_PCH

8.3.1.5.1 Definition

8.3.1.5.2 Conformance requirement

This procedure is to update UTRAN with the current cell information if the UE wants to transmit UL data while in URA_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.5.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits UL data if the UE is in URA_PCH state. To confirm that the UE sends the correct response to CELL UPDATE CONFIRM message, after it has taken into consideration the current TFS and/or TFCS settings.

Initial Condition

System Simulator: 1cell

UE: URA_PCH

Test Procedure

The UE starts from URA_PCH state, after the operator initiates an outgoing packet data transmission. The UE then moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "UL data transmission". After receiving such a message, SS transmits CELL UPDATE CONFIRM message without specifying any of the following IEs: "new C-RNTI", "new U-RNTI", "PRACH Info" and "Secondary CCPCH Info". The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS waits until uplink data transmission is completed and sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. Since the IE "DRX Indicator" is set to "DRX with URA updating" in the downlink message, the UE shall move to URA_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message and specifies the cause to be "UL data transmission". SS replies with the default CELL UPDATE CONFIRM message defined in TS 34.108. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS again waits for the transmission of user packet data to complete and then sends RNTI REALLOCATION message on the downlink DCCH. The IE "DRX Indicator" is set to "DRX with URA updating". The UE shall move to URA_PCH state and acknowledges that it starts using the new RNTI identity provided. Finally, SS prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message once more. After the SS receives this message, it replies with a CELL UPDATE CONFIRM message including the IEs "PRACH info", "Secondary CCPCH info". The IE "DRX Indicator" is set to "No DRX" in this message. The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink PRACH specified in the CELL UPDATE CONFIRM message. Then the UE shall enter CELL_FACH state and proceed to transmit packet data.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to URA_PCH state. SS prompts the test operator to begin a packet data transmission.
2		→	CELL UPDATE	The UE shall move to CELL FACH state with the message set to "UL data transmission" in IE" Cell update cause" .
3		←	CELL UPDATE CONFIRM	Use default message content.
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
5				SS waits until transmission of uplink data has been completed.
6		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with URA update"
7		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
8				SS modifies SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. SS prompts test operator to initiate a packet data transmission.
9		→	CELL UPDATE	Should be same as in step 2
10		←	CELL UPDATE CONFIRM	Use default message content.
11		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
12				SS waits until transmission of uplink data has been completed.
13		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with URA update"
14		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
15				SS prompts test operator to initiate a packet data transmission.
16		→	CELL UPDATE	Should be same as in step 2
17		←	CELL UPDATE CONFIRM	Including the IEs" PRACH info", " Secondary CCPCH"
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	SS verifies that this message is received from PRACH physical channel using the configurations set in IE"PRACH Info" in CELL UPDATE CONFIRM message.

Specific Message Contents

CELL UPDATE (Step 2, 9 and 16)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 1111'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'UL Data Transmission'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 3 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	0
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	
- Sub-Channel number	0
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

RNTI REALLOCATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 1111'
DRX Indicator	DRX with URA updating

RNTI REALLOCATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'0000 0000 1111 1111'
DRX Indicator	DRX with URA updating

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 4 and 18)

Only the message type IE in this message will be checked.

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 12)

Only the message type IE in this message will be checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 8)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information	
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- Octet mode RLC size info type 2	
- CHOICE Transport block size	Size type 1
- Size type 1	296
- Semi-static Transport Format	
- Transmission time interval	80 msec
- Type of channel coding	No coding
- Coding Rate	No Present
- Rate matching attribute	1
- CRC Size	16 bits

8.3.1.5.5 Test requirement

After step 1 the UE shall move to CELL_FACH state to initiate a cell update procedure and transmits a CELL UPDATE message which is set to "UL data transmission" in IE" Cell update cause".

After step 3 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 10 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH resources assigned in CELL UPDATE CONFIRM, which is sent in step 17.

8.3.1.6 Cell Update: UL data transmission in CELL_PCH

8.3.1.6.1 Definition

8.3.1.6.2 Conformance requirement

This procedure is to update UTRAN with the current cell of the UE if the UE wants to transmit UL data when the UE is in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.6.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits UL data if the UE is in CELL_PCH state. To confirm that the UE sends the correct response to CELL UPDATE CONFIRM message, after it has taken into consideration the current TFS and/or TFCS settings.

8.3.1.6.4 Method of test

Initial Condition

System Simulator: 1cell

UE: CELL_PCH

Test Procedure

The UE is in the CELL_PCH state. SS asks the test operator to send some packet data. The UE moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, which shall indicate "UL data transmission" in IE" Cell update cause". After receiving such a message, SS transmits default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit

PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS waits until uplink data transmission is completed and sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. Since the IE"DRX Indicator" is set to "DRX with cell updating" in the downlink message, the UE shall move to CELL_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message and specifies the cause to be "UL data transmission". SS replies with a CELL UPDATE CONFIRM message which assigns a new C-RNTI to the UE. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS again waits for the transmission of user packet data to complete and then sends RNTI REALLOCATION message on the downlink DCCH. The IE"DRX Indicator" is set to "DRX with cell updating". The UE shall move to CELL_PCH state and acknowledges that it starts using the new RNTI identity provided. Finally, SS prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message once more. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs" PRACH info" and set IE"DRX Indicator" to "No DRX". Then the UE shall enter to the CELL_FACH state after sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS prompts the test operator to initiate a packet data call.
2		→	CELL UPDATE	The UE moves to CELL FACH state and transmit this message which is set to "UL data transmission" in IE" Cell update cause".
3		←	CELL UPDATE CONFIRM	Use default message content.
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
5				SS waits until transmission of uplink data has been completed.
6		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with cell update"
7		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
8				SS modifies SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. SS prompts test operator to initiate a packet data transmission.
9		→	CELL UPDATE	Should be same as in step 2
10		←	CELL UPDATE CONFIRM	Use default message content.
11		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
12				SS waits until transmission of uplink data has been completed.
13		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with cell update"
14		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
15				SS prompts test operator to initiate a packet data transmission.
16		→	CELL UPDATE	Should be same as in step 2
17		←	CELL UPDATE CONFIRM	Including the IE" PRACH info" and set IE"DRX Indicator" to "No DRX".
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	SS verifies that this message is received from PRACH physical channel using the configurations set in IE"PRACH Info" in CELL UPDATE CONFIRM message.

Specific Message Contents

CELL UPDATE (Step 2, 9 and 16)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 1111'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'UL Data Transmission'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	

CELL UPDATE CONFIRM (Step 3 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	0
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	
- Sub-Channel number	0
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

RNTI REALLOCATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'0000 0000 0000 1111'
DRX Indicator	DRX with cell updating

RNTI REALLOCATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'0000 0000 1111 1111'
DRX Indicator	DRX with cell updating

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 4 and 18)

Only the message type IE in this message will be checked.

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 12)

Only the message type IE in this message will be checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 8)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information	
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- Octet mode RLC size info type 2	
- CHOICE Transport block size	Size type 1
- Size type 1	296
- Semi-static Transport Format	
- Transmission time interval	80 msec
- Type of channel coding	No coding
- Coding Rate	No Present
- Rate matching attribute	1
- CRC Size	16 bits

8.3.1.6.5 Test requirement

After step 1 the UE shall move to CELL_FACH state, initiate a cell update procedure for the UL data transmission, and transmit a CELL UPDATE message which is set to "UL data transmission" in IE" Cell update cause".

After step 3 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 10 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH resources assigned in CELL UPDATE CONFIRM, which is sent in step 17.

8.3.1.7 Cell Update: paging response in URA_PCH

8.3.1.7.1 Definition

8.3.1.7.2 Conformance requirement

This procedure is to update UTRAN with the current cell of the UE after it receives a PAGING TYPE 1 message addressed to itself while it is in URA_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.7.3 Test purpose

To confirm that the UE executes a cell update procedure when it receives a PAGING TYPE1 message while operating in URA_PCH state. To confirm that the UE responds with an appropriate uplink message after receiving a CELL UPDATE CONFIRM message during cell updating procedure triggered by paging.

8.3.1.7.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH

Test Procedure

The UE is brought to URA_PCH state. SS transmits a PAGING TYPE 1 message to page for the UE, setting IE" paging originator" to "UTRAN Originator". The UE shall move to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH. This message shall set IE" Cell update cause" to

"Paging Response". After the SS receives this message, it transmits the default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS then sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. In this message, the IE "DRX Indicator" is set to "DRX with URA updating". As a result, the UE shall move to URA_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS pages the UE again using the U-RNTI identity. The UE shall send CELL UPDATE message and specify the cause to be "Paging Response". SS replies with the default CELL UPDATE CONFIRM message again. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS sends another RNTI REALLOCATION message on the downlink DCCH, with the IE "DRX Indicator" set to "DRX with URA updating". The UE shall move to URA_PCH state and acknowledges that it starts using the new C-RNTI identity provided by transmitting RNTI REALLOCATION COMPLETE message. SS pages the UE again using PAGING TYPE 1 message. The UE shall send CELL UPDATE message once more. SS transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI", "new U-RNTI" on the downlink DCCH. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. In the next sequence, SS transmits RNTI REALLOCATION message and assigns a new C-RNTI identity to the UE. The UE shall reply with RNTI REALLOCATION COMPLETE message and move to URA_PCH state. SS then pages the UE once more using PAGING TYPE 1 message. The UE shall initial the cell update procedure by dispatching a CELL UPDATE message on the uplink CCCH. SS replies with a CELL UPDATE CONFIRM message which includes information of the PRACH channel to be used. The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE, sent on the DCCH supported by the PRACH indicated in CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is first brought to URA_PCH state.
2		←	PAGING TYPE 1	SS transmits a PAGING TYPE1 message to the UE which includes the UE's assigned U-RNTI with the IE" paging originator" set to "UTRAN originator".
3		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "paging response".
4		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
6				SS modifies SYSTEM INFORMATION BLOCK TYPE 5 and 6 message. The TFS of the PRACH is changed.
7		←	RNTI REALLOCATION	Allocates a new U-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
8		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
9		←	PAGING TYPE 1	SS pages the UE again
10		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
11		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
12		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
13		←	RNTI REALLOCATION	Allocates a new U-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
14		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
15		←	PAGING TYPE 1	SS pages the UE again
16		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
17		←	CELL UPDATE CONFIRM	IE "new C-RNTI" is included in this message
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
19		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
20		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
21		←	PAGING TYPE 1	UE paged using U-RNTI identity.
22		→	CELL UPDATE	IE"Cell Update Cause" shall be set to "Paging Response"
23		←	CELL UPDATE CONFIRM	IE "PRACH Info" is included.
24		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	This message shall be sent on the PRACH resource allocated in step 23.

Specific Message Contents

PAGING TYPE 1 (Step 2, 9, 15 and 21)

Information Element	Value/remark
CHOICE Paging Originator - U-RNTI - SRNC Identity - S-RNTI	UTRAN Originator '0000 0000 0001' '0000 0000 0000 0000 0001'

CELL UPDATE (Step 3, 10, 16 and 22)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Paging Response' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 4 and 11)

Use the same message sub-type found in Clause 8.1 of TS34.108.

PHYSICAL CHANNEL RECONFIGURATION (Step 5, 18 and 24)

Only the message type for this message is checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information - RACH TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE Mode - Octet mode RLC size info type 2 - CHOICE Transport block size - Size type 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC Size	 Common transport channels 1 FDD Size type 1 296 80 msec No coding No Present 1 16 bits

RNTI REALLOCATION (Step 7, 13 and 19)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	Selects any arbitrary unused 16-bits string DRX with URA updating

TRANSPORT CHANNEL RECONFIGURATION (Step 12)

Only the message type for this message is checked.

CELL UPDATE CONFIRM (Step 17)

Information Element	Value/remark
New C-RNTI	Selects any arbitrary unused 16-bits string

CELL UPDATE CONFIRM (Step 23)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	1
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	1
- Sub-Channel number	
Downlink DPCCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

8.3.1.7.5 Test requirement

After step 2 the UE shall answer to the paging message then moves to CELL_FACH state and transmit a CELL UPDATE message. This message shall set the value "paging response" into IE" Cell update cause". After step 4 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters CELL_FACH state.

After step 9 the UE shall respond the paging by replying with a CELL UPDATE message. IE"Cell Update Cause" shall be set to "Paging Response" in this message.

After step 11 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall answer the PAGING TYPE 1 message by sending a CELL UPDATE message. The IE"Cell Update Cause" shall have a value equals to "Paging Response".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 21 the UE shall respond to the PAGING TYPE 1 message addressed to itself and initiate a cell update procedure. It shall transmit CELL UPDATE message with the IE"Cell Update Cause" set to "Paging Response" in this message.

After step 23 the UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH channel indicated in CELL UPDATE CONFIRM message sent in step 23.

8.3.1.8 Cell Update: paging response in CELL_PCH

8.3.1.8.1 Definition

8.3.1.8.2 Conformance requirement

This procedure is to update UTRAN with the current cell when the UE receives a PAGING TYPE 1 message addressed to it while in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.8.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE receives a PAGING TYPE1 message while in CELL_PCH state. To confirm that the UE sends an appropriate uplink message after receiving a CELL UPDATE CONFIRM message during cell updating procedure due to paging.

8.3.1.8.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is in the CELL_PCH state. The SS transmits a PAGING TYPE 1 message to the UE on the downlink PCCH which includes the connected mode identity of the UE and set value "UTRAN originator" into IE" paging originator". The UE shall respond to this message. Then the UE shall move to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH which and set the value "Paging Response" into IE" Cell update cause". After the SS receives this message, it transmits the default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS then sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. In this message, the IE"DRX Indicator" is set to "DRX with cell updating". As a result, the UE shall move to CELL_PCH state. SS pages the UE again using the U-RNTI identity. The UE shall send CELL UPDATE message and specify the cause to be "Paging Response". SS replies with a CELL UPDATE CONFIRM message which comprises a new C-RNTI identity for the UE. After receiving this message, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then sends another RNTI REALLOCATION message on the downlink DCCH, with the IE"DRX Indicator" set to "DRX with cell updating". The UE shall move to CELL_PCH state and acknowledges that it starts using the new C-RNTI identity provided by transmitting RNTI REALLOCATION COMPLETE message. SS pages the UE again using PAGING TYPE 1 message. The UE shall send CELL UPDATE message once more. SS replies with a CELL UPDATE CONFIRM message which includes the IE"new C-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters the CELL_FACH state. In the final sequence, SS transmits RNTI REALLOCATION message and assigns a new C-RNTI identity to the UE. The UE shall reply with RNTI REALLOCATION COMPLETE message and move to CELL_PCH state. SS then pages the UE once more using PAGING TYPE 1 message. The UE shall initial the cell update procedure by dispatching a CELL UPDATE message on the uplink CCCH. SS replies with a CELL UPDATE CONFIRM message which includes the IE"PRACH Info". The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE, sent on the DCCH supported by the PRACH indicated in CELL UPDATE CONFIRM message. Next, SS sends RNTI REALLOCATION message to UE with the "DRX Indicator" IE set to "DRX with cell updating". The UE shall respond by transmitting RNTI REALLOCATION COMPLETE message on the uplink DCCH and then move to CELL_PCH state. SS pages the UE again using connected mode identity at the paging occasions assigned to the UE. The UE shall answer to the page and sent CELL UPDATE message on the uplink CCCH. SS responds to the reception of this message by transmitting a CELL UPDATE CONFIRM message on the downlink DCCH. In this message, a set of new PRACH resources is assigned. The UE shall acknowledge the receipt of this message and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH supported by the new PRACH channel.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_PCH state.
2		←	PAGING TYPE 1	The SS transmits a PAGING TYPE1 message addressing the UE with its connected mode identity and set IE" paging originator" to "UTRAN originator".
3		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "paging response".
4		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
6				SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages.
7		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with cell updating"
8		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state
9		←	PAGING TYPE 1	SS pages the UE again
10		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response"
11		←	CELL UPDATE CONFIRM	Contains the IE"new C-RNTI"
12		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmit this message.
13		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with cell updating".
14		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
15		←	PAGING TYPE 1	SS pages the UE again
16		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
17		←	CELL UPDATE CONFIRM	Including IE "PRACH Info" in this message.
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	To be sent on the new PRACH channel.
<u>19</u>		<u>←</u>	<u>RNTI REALLOCATION</u>	<u>Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with cell updating".</u>
<u>20</u>		<u>→</u>	<u>RNTI REALLOCATION COMPLETE</u>	<u>UE moves to CELL_PCH state.</u>
<u>21</u>		<u>←</u>	<u>PAGING TYPE 1</u>	<u>UE paged using U-RNTI identity.</u>
<u>22</u>		<u>→</u>	<u>CELL UPDATE</u>	<u>IE"Cell Update Cause" shall be set to "Paging Response"</u>
<u>23</u>		<u>←</u>	<u>CELL UPDATE CONFIRM</u>	<u>IE "PRACH Info" is included.</u>
<u>24</u>		<u>→</u>	<u>PHYSICAL CHANNEL RECONFIGURATION COMPLETE</u>	<u>This message shall be sent on the PRACH resource allocated in step 23.</u>

Specific Message Contents

Clause PAGING TYPE 1

Information Element	Value/remark
CHOICE Paging Originator	UTRAN Originator
- U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0000 0000 0000 0000 0001'

CELL UPDATE (Step 3, 10 and 16)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Paging Response'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Clause 8.1 of TS34.108.

PHYSICAL CHANNEL RECONFIGURATION (Step 5 and 18)

Only the message type for this message is checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information	
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- Octet mode RLC size info type 2	
- CHOICE Transport block size	Size type 1
- Size type 1	296
- Semi-static Transport Format	
- Transmission time interval	80 msec
- Type of channel coding	No coding
- Coding Rate	No Present
- Rate matching attribute	1
- CRC Size	16 bits

RNTI REALLOCATION (Step 7 ~~and~~, 13 and 19)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI	Selects any arbitrary unused 16-bits string
DRX Indicator	DRX with cell updating

TRANSPORT CHANNEL RECONFIGURATION (Step 12)

Only the message type for this message is checked.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	2
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	2
- Sub-Channel number	
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

CELL UPDATE CONFIRM (Step 23)

Use the same message sub-type found in Clause 9 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	<u>1</u>
- Signature	<u>Refer to the parameter set for TS 34.108</u>
- Available SF	<u>0</u>
- Scrambling code number	<u>Refer to the parameter set for TS 34.108</u>
- Puncturing Limit	
- Available Sub-Channel number	
- Sub-Channel number	<u>1</u>
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	<u>Set to the scrambling code for cell 1's P-CPICH.</u>
- PDSCH with SHO DCH Info	<u>Not Present.</u>
- PDSCH code mapping	<u>Not Present.</u>
- Secondary CCPCH Info	
- Selection Indicator	<u>Not Present</u>
- Primary CPICH usage for channel estimation	<u>TRUE</u>
- Secondary CPICH Info	
- Secondary scrambling code	<u>Not Present. Use default (Scrambling code of P-CPICH)</u>
- Channelization code	<u>1</u>
- Secondary scrambling code	<u>Not Present. Use default (Scrambling code of P-CPICH)</u>
- STTD indicator	<u>FALSE</u>
- Spreading factor	<u>256</u>
- Code number	<u>255</u>
- Pilot symbol existence	<u>TRUE</u>
- TFCI existence	<u>TRUE</u>
- Fixed or Flexible Position	<u>Flexible</u>
- Timing Offset	<u>0 chips</u>

8.3.1.8.5 Test requirement

After step 2 the UE shall answer to the paging message, moves to CELL_FACH state, and then transmits a CELL UPDATE message setting "paging response" into IE" Cell update cause".

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and then enter CELL_FACH state.

After step 9 the UE shall respond to the paging again by sending CELL UPDATE message, with the IE"Cell update cause" set to "Paging response".

After step 11 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to end the cell updating procedure.

After step 15 the UE shall answers the paging message by sending a CELL UPDATE message, with the IE"Cell update cause" set to "Paging response".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH carried by the PRACH indicated in the **CELL UPDATE CONFIRM** message sent in step 17.

After step 21 the UE shall respond to the paging and initiate a cell update procedure. It shall transmit CELL UPDATE message with the IE"Cell Update Cause" set to "Paging Response" in this message.

After step 23 the UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH channel indicated in CELL UPDATE CONFIRM message sent in step 23.

8.3.1.9 Cell Update: re-entering of service area after T305 expiry and being out of service area

8.3.1.9.1 Definition

8.3.1.9.2 Conformance requirement

When a UE detects that it's out of service area after experiencing a T305 timer expiry, it shall try to search for a suitable cell to camp on. At the same time, it shall start timer T307. If the UE subsequently re-enters the service area of a cell before T307 expires, it shall perform a cell update procedure.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.9.3 Test purpose

To confirm that the UE performs a cell search after experiencing an "out of service area" condition following the expiry of timer T305. To confirm that the UE initiates cell updating procedure if it manages to re-enter the service area. 8.3.1.9.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active with the CPICH Ec/No set to –80dB and the $Q_{qualmin}$ value is at –90dBm. Cell 2 is inactive.

UE: CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state. SS decreases the transmission power of cell 1 until the cell selection parameter $S < 0$ (decrease transmission power of cell 1's CPICH by 15 dBm). Following the expiry of periodic cell updating timer T305 according to the system information, the UE shall detect that it is out of service area. Within the time interval equivalent to T307 timer value, the SS restores the transmission power of cell 1. The UE shall find that it is back in service area, and transmits a CELL UPDATE message to the SS on the uplink CCCH. In this message, the IE"Cell update cause" shall be set to "periodic cell update". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message with the IE"DRX Indicator" set "No DRX" on the downlink DCCH. The UE shall enter CELL_FACH state. Next, cell 1 is switched off. SS waits until T305 timer has expired and then turns on cell 2. The transmission level for cell 2 is such that the CPICH Ec/No value is estimated at –70dB. $Q_{qualmin}$ of cell 2 is identical to the value used previously by cell 1. The UE shall discover that cell 1 is no longer suitable for camping and initiate a cell search. It shall detect the presence of cell 2 and reselects to this cell. Following this, it shall transmit CELL UPDATE message with the cause set to "Cell Reselection". SS ends this test by sending a CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state of cell 1.
2				SS decreases the transmission power of cell 1 so that its S value falls below 0.
3				The UE shall detect a "out of service" condition upon expiry of timer T305 and it shall search for other cells to camp on.(T307 timer starts)
4				SS restores cell 1's original power level before T307 timer expires.
5		→	CELL UPDATE	The value "periodic cell update" should be found in IE" Cell update cause" in this message
6		←	CELL UPDATE CONFIRM	"DRX Indicator" is set to "No DRX"
7				SS switches off cell 1 and wait until T305 has expired.
8				SS turns on cell 2 and set the transmission strength of such that CPICH Ec/No is at -70dB.
9			CELL UPDATE	UE shall detect the presence of cell 2 and re-select to it. It shall transmit this message with cause set to "Cell Reselection"
10			CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 6 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE (Step 9)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 1111'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'Cell Reselection'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	

8.3.1.9.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message in which the IE" Cell update cause" is set to the value "periodic cell update".

After step 8 the UE shall reselect to cell 2 and then transmit a CELL UPDATE message, with the IE"Cell Update Cause" set to "Cell Reselection".

8.3.1.10 Cell Update: expiry of T307 after T305 expiry and being out of service area

8.3.1.10.1 Definition

8.3.1.10.2 Conformance requirement

This procedure is required to cater for the case of a failure to update UTRAN with the current cell, after the expiry of T307. In this case, the UE shall return to idle mode and perform cell reselection if possible.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.10.3 Test purpose

To confirm that the UE moves to idle mode after the expiry of T307, indicating that it is out of service area when attempting to perform a periodic cell updating procedure.

8.3.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is in CELL_PCH state at the start of the test. Before the expiry of periodic cell updating timer T305, SS starts to decrease the downlink transmission power such that the UE discovers that the cell is no longer suitable for camping and this results in a "out of service area" condition. The SS continues to listen to the uplink channel to detect possible attempts to perform a cell updating procedure. The UE shall not send CELL UPDATE message on the uplink DCCH, instead it triggers timer T307. After the expiry of timer T307 the UE enters idle state. This confirmed by the SS when it sends a PAGING TYPE 1 message to the UE using its U-RNTI identity, and the UE does not respond to the page. SS then attempts to page for the UE again, this time using PAGING TYPE 2 message sent on downlink DCCH. Likewise, the UE shall not respond to this page.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FAPCH state.
2				SS starts to decrease the transmission power until the cell is no longer suitable for camping. The UE shall detect that it is out of service area and refrains from transmitting CELL UPDATE message due to periodic cell updating.
3				The UE detects the expiry of timer T305 and it searches for cell to camp.(T307 timer starts). After the expiry of timer T307 the UE The UE enters to the idle state.
4		←	PAGING TYPE 1	SS pages the UE at its assigned paging occasion using the allocated U-RNTI value. The UE shall not respond to this page as it has already entered the idle mode.
5		←	PAGING TYPE 2	SS pages the UE on the downlink DCCH. The UE shall not respond to this page.

Specific Message Contents

Paging Type 1 (Step 4)

Information Element	Value/remark
Page record list - Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI BCCH Modification info	UTRAN Originator Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not Present.

Paging Type 2 (Step 5)

Information Element	Value/remark
Integrity check info Paging cause CN domain identity Paging Record Type Identifier	Not Present Terminating PS Data Call CS-Domain IMSI (DS-41)

8.3.1.10.5 Test requirement

After step 4 the UE shall remain in the idle mode and not respond to the paging message sent on PCCH.
 After step 5 the UE shall remain in the idle mode and not respond to the paging message addressed to it on the DCCH.

8.3.1.11 Cell Update: Success after T302 time-out

8.3.1.11.1 Definition

8.3.1.11.2 Conformance requirement

The UE transmits a CELL UPDATE message to the UTRAN when it needs to update the UTRAN with the current cell of the UE. When the UE does not receive a CELL UPDATE CONFIRM message upon expiry of timer T302, the UE transmits a CELL UPDATE message repeatedly until its internal counter V302 counter is greater than N302.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.11.3 Test purpose

To confirm that the UE repeats the transmission of CELL UPDATE message upon the expiry of timer T302, after failing to receive any response from the SS during T302 timer period.

8.3.1.11.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH

Test Procedure

At the start of the test, the UE is brought to CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH. The IE" Cell update cause" in this message shall be set to "periodic cell update". SS ignores this message, and the UE shall then re-transmit a CELL UPDATE message after the expiry of timer T302. When the SS has received (N302+1) such messages, it transmits a CELL UPDATE CONFIRM message with new values for "C-RNTI" to the UE. Finally, the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE starts from CELL_FACH state. SS initializes its internal counter K to 0 and wait until the expiry of T302 timer.
2		→	CELL UPDATE	The value "periodic cell update" shall be set in IE" Cell update cause" after the expiry of timer T305.
3				If K is equal to N302 then proceeds to step 5.
4				SS increments counter K, transmits no response to the UE and waits for an additional period equals to the value of timer T302. The next step is step 2.
5		←	CELL UPDATE CONFIRM	The message includes IEs" new C-RNTI". The IE"DRX Indicator" is set to "No DRX".
6		→	RNTI REALLOCATION COMPLETE	

Specific Message Contents

CELL UPDATE (Step 2)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exception:

Information Element	Value/remark
New C-RNTI	Set to an arbitrary string different from '0000 0000 0000 0001'

8.3.1.11.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 then transmit a CELL UPDATE message on the uplink CCCH, setting "periodic cell update" into IE" Cell update cause".

After step 2 the UE shall re-transmits a CELL UPDATE message after the expiry of timer T302. A total of (N302+1) transmissions shall be detected in SS.

After step5 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH and stays at CELL_FACH state.

8.3.1.12 Cell Update: Failure (After Maximum Re-transmissions)

8.3.1.12.1 Definition

8.3.1.12.2 Conformance requirement

The UE transmits a CELL UPDATE message to the UTRAN when it needs to update UTRAN with information on the current cell of the UE. If the UE fails to receive a CELL UPDATE CONFIRM message, it re-transmits a CELL UPDATE message repeatedly upon the expiry of timer T302 until the value of V302 counter is greater than N302. If V302 is greater than N302, the UE stop the re-transmission and enters idle state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.12.3 Test purpose

To confirm that the UE repeats the cell update procedure at the expiry of timer T302 and moves to idle state when its internal counter V302 is greater than N302.

8.3.1.12.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodic cell updating procedure. The SS ignores this message, and the UE shall attempt to re-transmit a CELL UPDATE message up to a maximum of (N302+1) times after the expiry of timer T302. After (N302+1) attempts, the UE shall return to idle state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS sets its internal counter K=1 and waits for a period equals to timer value T302. If CELL UPDATE message is received upon timer expiry, proceeds to step 2. Else goes to step 5.
2		→	CELL UPDATE	The value "periodic cell update" should be set in IE" Cell update cause" and this message should be sent for each expiry of timer T302.
3				SS transmits no response to the UE and increments counter K.
4				SS waits for an additional period equals to T302 timer. If CELL UPDATE message is received, proceed to step 2. Otherwise, terminates the test. If K is not equal to N302, the test should be considered as a failure.

Specific Message Contents

CELL UPDATE (Step 2)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'Periodic cell updating'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

8.3.1.12.5 Test requirement

After step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodic cell update" into IE" Cell update cause".

After step 4 the counter K in SS shall be equal to N302.

8.3.1.13 Cell Update: Reception of Invalid CELL UPDATE CONFIRM Message

8.3.1.13.1 Definition

8.3.1.13.2 Conformance Requirement

If the UE encounters an invalid CELL UPDATE CONFIRM message while executing a cell update procedure, it shall check the current value of its internal counter V302. If V302 is not greater than N302, the UE shall set contexts pertaining to protocol error, re-transmits CELL UPDATE message on uplink CCCH, restart T302 timer and increments V302. It shall use the same "Cell Update Cause" as before receiving the invalid downlink message. On the other hand, if V302 is greater than N302, the UE shall abandon cell update procedure and enters idle mode.

8.3.1.13.3 Test Purpose

To confirm that the UE retransmits CELL UPDATE message when it receives an erroneous CELL UPDATE message, if the number of retransmissions is not the maximum allowed value. To confirm that the UE returns to idle mode after sending maximum allowed number of CELL UPDATE messages without receiving a valid CELL UPDATE CONFIRM message.

8.3.1.13.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall start to transmit CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with a CELL UPDATE CONFIRM message containing a protocol error in IE"DRX Indicator". The UE shall detect the protocol error and re-transmit CELL UPDATE message up to a maximum of N302 times. The time interval between the transmissions shall be approximately equal to T302. SS verifies that it receives a total of (N302+1) identical CELL UPDATE messages. The UE shall return to idle mode after all uplink transmissions have finished. SS verifies this by paging the UE using the U-RNTI identity. The UE shall not respond to this page.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE 1	The UE is in the CELL_PCH state. SS sets its internal counter K=0 and waits for a period equals to timer value T302. <u>SS pages for the UE using the allocated connected mode identity (U-RNTI).</u> If CELL UPDATE message is received upon timer expiry, proceeds to step 2. Else goes to step 5.
2		→	CELL UPDATE	The value "paging response" should be set in IE" Cell update cause".
3		←	CELL UPDATE CONFIRM	SS transmits an invalid message. SS increments K.
4		→	CELL UPDATE	SS waits for T302 timer to expire. The UE shall send CELL UPDATE message.
5				If a CELL UPDATE message is received in step 4, SS increments K, restart T302 timer and returns to execute step 4. Else, SS proceeds to step 6.
6				SS verifies that K = (N302+1) and proceeds to the next step. Else, the test fails.
7		←	PAGING TYPE 1	SS pages the UE.
8				UE shall not respond.

Specific Message Content

CELL UPDATE (Step 2-~~and 4~~)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'Paging Response'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exception:

Information Element	Value/remark
DRX Indicator	Use one of the spare values.

CELL UPDATE (Step 4)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Paging Response'
Protocol error indicator	Check to see if it is set to 'TRUE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is set to 'Information element value not comprehended'

Paging Type 1 (Step 1 and 7)

Information Element	Value/remark
Page record list	
- Paging record	
- CHOICE Paging originator	UTRAN Originator
- U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 1110001'
BCCH Modification info	Not Present.

8.3.1.13.5 Test Requirement

After step 3 the UE shall continue to transmit CELL UPDATE message for N302 times.

At step 6 the counter K should be equal to (N302+1).

After step 7 the UE shall return to idle mode and not respond the PAGING TYPE 1 message sent by the SS.

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these case. When the UTRAN receives this message, it is able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause "RB Control" when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active, with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and been allocated dedicated physical resources. Next SS send RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the ~~UE~~SS sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel be released. However, this message does not contain information about the target cell to select when transiting to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to "RB Control" on the CCCH carried by PRACH physical channel, specified in cell 2's system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE"PRACH Info" and "Secondary CCPCH Info". To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on CCCH of cell 2. IE"Cell update cause" should be set to "RB Control". IE"DRX Indicator" set to "No DRX".
6		←	CELL UPDATE CONFIRM	IE"PRACH Info" and IE"Secondary CCPCH Info" are included in this message.
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information for setup - RAB Info - RAB Identity - CN Domain Identity - RB Info to setup list - RB Info to setup - RB Identity - PDCP Info - RLC Info - RB Mapping Info	4 PS 4 Not Present. Use the same RLC configuration as in TS 34.108. Use the same RLC multiplexing scheme as in TS 34.108. Not Present.
RB to be affected list UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS addition information - CHOICE CTFC Size - CTFC Information - x bit CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present – use default value, all TFCs are allowed. FDD Normal Addition Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel
Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE RLC mode - Octet mode RLC size info type 1 - CHOICE Octet mode RLC size - Size part 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 Dedicated transport channels 1 Octet Mode RLC size info type 1 Size type 1 16 Use the same settings as in TS 34.108
DL Transport Channel information common to all transport channels Deleted TrCH information list (downlink) Added or Reconfigured DL TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present. 2 Same as the TFS used in the uplink specified in this message.
Frequency info Maximum allow UL TX power	Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class.
CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present. Not Present. Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark

RAB information to release list	4
- RB Identity	
RB information to be affected list	
- RB information to be affected	DCCH for RRC (UM)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	1
- Logical channel identity	DCCH for RRC (AM)
- RB information to be affected	1
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	DCCH for NAS_DT-AM High Priority
- RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	DCCH for NAS_DT-AM Low Priority
- RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	5
- MAC logical channel priority	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	
UL Transport Channel information common to all transport channels	
- TFC Subset	Not Present – use default value, all TFCs are allowed.
- CHOICE Mode	FDD
- UL DCH TFCS	Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2.
Deleted TrCH information list (uplink)	Not Present.
Added or Reconfigured TrCH information list	
- Added or Reconfigured UL TrCH information	1
- Transport channel identity	Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2.
- TFS	
DL Transport Channel information common to all transport channels	
- SCCPCH TFCS	Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2.
- DL DCH TFCS	Not Present.
Deleted TrCH information list (downlink)	
Added or Reconfigured TrCH information list	Not Present.

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'RB Control' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE"Cell Update Cause" shall be set to "RB Control".

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel broadcasted on the system information message in cell 2.

8.3.1.15 Cell Update: Acknowledged Mode RLC Reset

8.3.1.15.1 Definition

8.3.1.15.2 Conformance Requirement

In CELL_FACH, the UE shall ensure that all AM RLC entities (for both signalling links and u-plane links) are operational. In the event that an unrecoverable error (detectable when the amount of retransmissions of RESET_PDU reaches the value of MAX_DAT and the UE fails to receive any acknowledgements), the UE shall trigger cell update procedure to report this event. The UE shall send CELL UPDATE message on the uplink CCCH and set the appropriate AM_RLC error indicator IE(s) to TRUE. After receiving the CELL UPDATE CONFIRM message, the UE shall reset the affected AM RLC entities and then resume transmission and reception activities.

8.3.1.15.3 Test Purpose

To confirm that the UE reports the occurrence of an unrecoverable error in a C-plane AM RLC entity by initiating a cell update procedure. To confirm that the UE is able to resume normal C-plane data transmission and reception after the completion of cell update procedure.

8.3.1.15.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: Idle Mode

Test Procedure

The UE is initially in idle mode and camped onto cell 1. SS pages the UE using the IMSI identity stored in the test USIM card, with the cause stated as "Terminating PS Data Call". The UE shall respond by transmitting the RRC CONNECTION REQUEST message on the uplink CCCH, triggering the start of RRC connection establishment procedure. SS assigns common physical resources to the UE by sending RRC CONNECTION SETUP message. The UE shall reply with RRC CONNECTION SETUP COMPLETE on the DCCH before transiting to CELL_FACH state. Next, SS sends RADIO BEARER SETUP message on the DCCH using AM mode to establish a DTCH logical channel for u-plane packet data transfer. The UE shall reply with a RADIO BEARER SETUP COMPLETE message, sent using AM RLC on the DCCH. Then it activates the associated DTCH logical channel for user data transmission and reception. SS does not acknowledge the RADIO BEARER SETUP COMPLETE message. The UE shall continue to transmit the AM PDU carrying RADIO BEARER COMPLETE message until the maximum re-transmission count is reached. Thereafter, the UE shall start sending RESET PDUs to request that the AM RLC entity for RRC

signalling be re-initialized. SS ignores the requests and wait for a duration equivalent to the period equivalent to (MAX_RST+1) times expiry of Timer_RST. This figure is specified in IE"RLC info" of RADIO BEARER SETUP message in step 6. At this point, the UE shall initiate a cell update procedure by transmitting CELL UPDATE message on the uplink CCCH. The CELL UPDATE message shall specify the value "TRUE" in IE" AM_RLC error indicator (for C-plane)". SS replies with CELL UPDATE CONFIRM message using the default message content. SS then pages the UE using PAGING TYPE 2 message. The UE shall respond by sending an UPLINK DIRECT TRANSFER message on the uplink DCCH, which shall be embedded in an R PDU originating from the AM RLC entity for RRC signalling.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is initially in idle mode.
2		←	PAGING TYPE 1	SS pages the UE, citing the reason "Terminating PS data call" in the PAGING TYPE 1 message.
3		→	RRC CONNECTION REQUEST	Sent on CCCH using Transparent mode.
4		←	RRC CONNECTION SETUP	Allocate common physical resources for signalling RBs.
5		→	RRC CONNECTION SETUP COMPLETE	Sent on CCCH using Transparent mode.
6		←	RADIO BEARER SETUP	Establishes a DTCH logical channel operating in AM mode.
7		→	RADIO BEARER SETUP COMPLETE	UE shall stay in CELL_FACH state. SS does not acknowledge this AM PDU. The UE shall re-transmit this AM PDU until the maximum number has been reached.
8				UE shall start to transmit RESET PDU using AM RLC on the DCCH. SS does not respond to any PDU frames originating from the UE, and it waits for a period equivalent to (MAX_RST+1) times expiry of Timer_RST. This figure is specified in IE"RLC info" of RADIO BEARER SETUP message in step 6.
9		→	CELL UPDATE	UE shall send this message on CCCH. IE"AM_RLC Error Indication (for C-plane)" shall be set to 'TRUE'
10		←	CELL UPDATE CONFIRM	"DRX Indicator" set to "No DRX". UE shall transit to CELL_FACH state.
11		←	PAGING TYPE 2	SS pages the UE.
12		→	UPLINK DIRECT TRANSFER	This message shall be transmitted using AM RLC for RRC signalling on the uplink DCCH.

Specific Message Contents

PAGING TYPE 1 (Step 2)

Use the same message sub-type entitled "TM (Packet in PS)" found in Clause 9 of TS34.108.

RRC CONNECTION REQUEST (Step 3)

Information Element	Value/remark
Initial UE Identity	Check to ~~see~~ if set to same value as the IMSI identity stored in the test USIM card.
Initial UE Capability	
- Maximum number of AM entities	Check to see if set to '4 to 8' or '16 to 32'.
Establishment Cause	Check to see if set to 'Terminating PS Call'.
Protocol Error Indicator	Check to see if set to 'FALSE'.
Measured Results on RACH	Not checked.

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type entitled "Transition to CELL_FACH" found in Clause 9 of TS34.108.

RRC CONNECTION SETUP COMPLETE (Step 5)

Only the message type IE is checked in this message.

RADIO BEARER SETUP (Step 6)

Use the same message sub-type entitled "Packet to CELL_FACH from CELL_FACH in PS" found in Clause 9 of TS34.108.

RADIO BEARER SETUP COMPLETE (Step 7)

Only the message type IE is checked for this message.

CELL UPDATE (Step 9)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'TRUE'
Cell Update Cause	Not checked
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in Clause 9 of TS34.108.

PAGING TYPE 2 (Step 11)

Information Element	Values/Remarks
Paging cause	Terminating PS Data Call
CN domain identity	PS Domain
Paging Record Type Identifier	Supported IMSI

UPLINK DIRECT TRANSFER (Step 12)

Only the message type IE is checked for this message.

8.3.1.15.5 Test Requirement

After step 8 the UE shall transmit a CELL UPDATE message on the uplink CCCH to report the occurrence of an unrecoverable error in AM RLC entity for C-plane data.

After step 11 the UE shall send an UPLINK DIRECT TRANSFER message on the uplink DCCH. This message shall be sent using the AM RLC entity for RRC signalling.

8.3.2 URA Update

8.3.2.1 URA Update: URA reselecion

8.3.2.1.1 Definition

8.3.2.1.2 Conformance requirement

This procedure is to update UTRAN with the current URA of the UE after a URA reselecion has occurred in URA_PCH state. It may also be used for supervision of the RRC connection, even if ~~no~~ URA reselecion takes place.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.1.3 Test purpose

To confirm that the UE executes a URA update procedure after the successful URA reselection.

8.3.2.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active with URA-ID 1, Cell 2 is inactive with URA-ID 2

UE: URA_PCH with URA-ID 1 in the list of URA-ID from cell 1

Test Procedure

The UE is in the URA_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. The SS starts to broadcast BCCH in cell 2 with URA-ID 2 and stop transmitting BCCH in cell 1. This is expected to cause the UE to perform a cell reselection to cell 2. When the UE finds that URA-ID 2 is not in its current list of URA-IDs, it moves to CELL_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits URA UPDATE CONFIRM message which includes the IEs "DRX Indicator" and "URA-ID" to the UE on the downlink DCCH. The "DRX Indicator" is set to "DRX with URA updating". Finally, the UE returns to URA_PCH state in cell 2 without sending a uplink response message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is updated with only 1 URA identity carried currently by cell 1. The starting state of the UE is URA_PCH
2		←	BCCH	SS starts sending BCCH for cell 2 with URA-ID 2 and ceases to transmit BCCH with URA-ID 1 carried by cell 1.
3		→	URA UPDATE	The UE shall perform a cell reselection first and then it finds that a new URA-ID 2 is not in the list of its URA-IDs stored. It shall then transmit this message and set value "URA reselection" into IE "URA update cause".
4		←	URA UPDATE CONFIRM	Message comprises IE "DRX Indicator" set "DRX with URA updating", and also IE "URA Identity" equals to "URA-ID 2".

Specific Message Contents

URA UPDATE (Step 3)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator	Check to see if set to 'FALSE'
URA Update Cause	Check to see if set to 'Change of URA'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Protocol error information	Check to see if it is absent

URA UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
DRX Indicator	DRX with URA updating

8.3.2.1.5 Test requirement

After step 2 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit URA UPDATE message setting value "Change of URA" into IE" URA update cause".

8.3.2.2 URA Update: periodical URA update

8.3.2.2.1 Definition

8.3.2.2.2 Conformance requirement

This procedure is to update UTRAN with the current URA of the UE when the UE detects that it is still within the service area after the expiry of periodic URA updating timer T306.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.2.3 Test purpose

To confirm that the UE executes a URA update procedure after the expiry of timer T306. To verify that the UE handles an invalid URA UPDATE CONFIRM message correctly when executing the URA update procedure.

8.3.2.2.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH with URA-ID 1

Test Procedure

The UE is in the URA_PCH state with URA-ID 1. When the UE detects the expiry of timer T306, set according to the value specified in system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE" URA update cause". SS replies with an illegal URA UPDATE CONFIRM message sent on downlink CCCH, and check to see if the UE handles this event properly. The UE shall attempt to retransmit the identical URA UPDATE message. After the SS receives the second URA UPDATE message, it transmits a correct URA UPDATE CONFIRM message, which includes the IE " new U-RNTI", to the UE on the downlink DCCH. Then the UE shall then transmits an RNTI REALLOCATION COMPLETE message on the uplink DCCH. The UE returns to **URACELL_FACH** state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the URA_PCH state. SS wait until T306 timer has expired.
2		→	URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE" URA update cause".
3		←	URA UPDATE CONFIRM	SS sends an illegal message.
4		→	URA UPDATE	UE shall not return to idle mode immediately, but attempts to re-transmit this message.
5		←	URA UPDATE CONFIRM	Including IEs" new C-RNTI" , and "new U-RNTI"
6		→	RNTI REALLOCATION COMPLETE	

Specific Message Contents

URA UPDATE (Step 2 and 4)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator URA Update Cause Protocol error indicator Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'Periodic URA update' Check to see if it is absent or set to 'FALSE' Check to see if it is absent

URA UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
U-RNTI	Not Present

URA UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI SRNC Identity S-RNTI	'0000 0000 0001' '0000 0000 0000 0000 1111'

RNTI REALLOCATION COMPLETE (Step 6)

Only the message type IE of this message is checked.

8.3.2.2.5 Test requirement

After step 2 the UE shall detect the expiry of timer T306, move to CELL_FACH state, and transmit a URA UPDATE message which is set the value "periodic cell update" into IE" URA update cause".

After step 3 the UE shall re-transmit URA UPDATE message.

After step 5 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH and returns to the CELL_FACH state.

8.3.2.3 URA Update: re-entering of service area after T306 expiry

8.3.2.3.1 Definition

8.3.2.3.2 Conformance requirement

This procedure is to update UTRAN with the current URA of the UE if the UE detects that it is out of service area after the expiry of timer T306, and then subsequently re-enters the service area before the expiry of T307.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.3.3 Test purpose

To confirm that the UE executes a URA update procedure when the UE re-enters the service area before the expiry of timer T307, after being out of service area at the expiry of timer T306.

8.3.2.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH updated with URA-ID 1

Test Procedure

The UE is initially in URA_PCH state, updated with URA-ID 1. SS decrease the transmission power of cell such that cell selection figure of merit $S < 0$. When the UE detects the expiry of timer T306 according to the system information, the UE moves to CELL_FACH state and finds that it is out of service area. The UE is expected to search for cell to camp. Then SS increases the transmission power so that the UE detects that it returns to normal service within T307. The UE shall move to CELL_FACH state and starts transmitting a URA UPDATE message which contains the value "periodic URA update" in IE "URA update cause" to the SS on the uplink CCCH. After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE "new C-RNTI", and "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE starts operating from URA_PCH state.
2				SS decreases the transmission power such that the cell is no longer suitable for camping i.e. $S < 0$.
3				The UE shall attempt to perform a URA update upon the expiry of timer T306. It shall discover that it is out of service and starts searching for cell to camp.(T307 timer starts)
4				SS increases the transmission power to the original level before T307 expires.
5		→	URA UPDATE	Value "periodic URA update" shall be set in IE "URA update cause"
6		←	URA UPDATE CONFIRM	The message includes IEs "new C-RNTI", and "new U-RNTI"
7		→	RNTI REALLOCATION COMPLETE	

Specific Message Contents

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:
URA UPDATE CONFIRM (Step 6)

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI	'0000 0000 0001' '0000 0000 1111 1111' Arbitrary 16-bit string which is different the assigned C-RNTI in RRC CONNECTION SETUP message.

8.3.2.3.5 Test requirement

After step 2 the UE shall detect that it is out of service area and shall not send a URA UPDATE on the uplink CCCH channel.

After step 4 the UE shall transmit a URA UPDATE message which sets value "periodic URA update" into IE" URA update cause", before the expiry of timer T307.

After step 6 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

8.3.2.4 URA Update: loss of service after expiry of timers T307 and T306

8.3.2.4.1 Definition

8.3.2.4.2 Conformance requirement

This procedure is required to handle the case when the UE fails to update UTRAN with the current URA of after expiry of timers T307 and T306 consecutively. The UE shall move to idle mode subsequently.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.4.3 Test purpose

To confirm that the UE moves to idle mode after the expiry of timer T307, following an expiry of timer T306 when it discovers that it is out of service area.

8.3.2.4.4 Method of test

Initial Condition

System Simulator : 1cell

UE : URA_PCH updated with URA-ID 1

Test Procedure

The UE is in URA_PCH state with URA-ID 1. SS stops the downlink transmissions of cell 1. When the UE detects the expiry of periodic URA updating timer T306 according to the system information, the UE moves to CELL_FACH state and detects that it is out of service area. After the expiry of timer T307, the UE moves to the idle state and start to perform cell reselection.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				Initially, the UE is in the URA_PCH state.
2				SS switched off the downlink transmission of cell 1 so that the UE detects that it is out of service area.
3				Upon the expiry of timer T306, the UE shall search for cell to camp and triggers T307 timer. SS listens to the uplink CCCH to verify that CELL UPDATE message is not transmitted.
4				After the expiry of timer T307, the UE enters idle state.

Specific Message Contents

None

8.3.2.4.5 Test requirement

After step 2 the UE shall detect the expiry of timer T306, not transmit URA UPDATE message on the uplink CCCH, move to CELL_FACH state, and start timer T307.

8.3.2.5 URA Update: Success after Confirmation error of URA-ID list

8.3.2.5.1 Definition

8.3.2.5.2 Conformance requirement

While in connected mode, the UE keeps a temporary list of URA-IDs broadcasted in a cell. The UE transmits a URA UPDATE message to the UTRAN when it needs to update UTRAN with the current URA of the UE. UTRAN should respond to the URA UPDATE message by sending a URA UPDATE CONFIRM message. When the indicated URA-ID in the received URA UPDATE CONFIRM message is not found in the temporary list of URA-IDs, the UE transmits a URA UPDATE message repeatedly until its internal counter V303 is greater than N303.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.5.3 Test purpose

To confirm that the UE retries to perform the URA update procedure following a confirmation error of URA-ID list.

8.3.2.5.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH updated with URA-ID 1

Test Procedure

At the start of this test, the UE is brought to URA_PCH state and assigned a URA with URA-ID 1. When the UE detects the expiry of timer T306 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The reason for performing URA updating shall be set to "periodic URA update" in IE "URA update cause". After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE "new C-RNTI", "new U-RNTI" and "URA-ID 2" to the UE on the downlink DCCH. The UE finds that the indicated URA-ID is not included in the temporary list of URA-IDs stored, then the UE shall retry to transmit a URA UPDATE message for a confirmation error of URA-ID list. SS continue to send the same URA UPDATE CONFIRM message until N303 URA UPDATE messages have been received. Then SS transmits a URA UPDATE CONFIRM message to the UE which includes IE "URA Identity" set to "URA-ID 1". The UE shall find this

URA-ID in its URA-ID list and transmits an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is URA_PCH state. SS initializes counter K to 0
2		→	URA UPDATE	This message shall contain value "periodic URA update" set in IE "URA update cause" after expiry of timer T306.
3				SS increments K by 1.
4		←	URA UPDATE CONFIRM	SS transmits this message, setting the value "URA-ID 2" to IE "URA Identity". If K is not greater than N303, SS waits for T303 to expires and then returns to step 2. If K is greater than N303, SS proceeds to step 5.
5		←	URA UPDATE CONFIRM	SS transmits this message, setting IE "URA Identity" to "URA-ID 1". This message also comprises IE "New U-RNTI".
6		→	RNTI REALLOCATION COMPLETE	

Specific Message Contents

URA UPDATE (Step 2)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator	Check to see if set to 'FALSE'
URA Update Cause	Check to see if set to 'Periodic URA update'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Protocol error information	Check to see if it is absent

URA UPDATE CONFIRM (Step 4)

Use the same message sub-type as specified in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
DRX Indicator	DRX with Cell updating
URA Identity	2

URA UPDATE CONFIRM (Step 5)

Use the same message sub-type as specified in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
SRNC Identity	'0000 0000 0001'
S-RNTI	'0000 0000 0000 0101 0101'
URA Identity	1

RNTI REALLOCATION COMPLETE (Step 6)

Only the message type IE in this message is checked.

8.3.2.5.5 Test requirement

After step 1 the UE shall detect the expiry of timer T306, move to CELL_FACH state, transmit a URA UPDATE message on the uplink CCCH and set value "periodic URA update" into IE "URA update cause".

After step 2 the UE shall repeatedly re-transmit a URA UPDATE message after it detects a confirmation error of URA-ID list for the URA-ID indicated in the URA UPDATE CONFIRM message. A total of (N303+1) URA UPDATE messages shall be received by the SS.

After step 5 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

8.3.2.6 URA Update: Failure (V303 is greater than N303 : Confirmation error of URA-ID list)

8.3.2.6.1 Definition

8.3.2.6.2 Conformance requirement

While in connected mode, the UE keeps a temporary list of all URA-IDs broadcasted in a cell. It transmits a URA UPDATE message to the UTRAN when it needs to update UTRAN with the current URA of the UE. When the indicated URA-ID in the received URA UPDATE CONFIRM message is not in the list of URA-IDs, the UE transmits URA UPDATE messages repeatedly until its internal counter V303 is greater than N303. If V303 is greater than N303 then the UE enters idle state.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.6.3 Test purpose

To confirm that the UE make repeated attempts to perform the URA update procedure following a detection of a confirmation error of URA-ID list. It then moves to idle state when internal counter V303 is greater than N303.

8.3.2.6.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH updated with URA-ID 1

Test Procedure

The UE is originally in the URA_PCH state updated with URA-ID 1. When the UE detects the expiry of timer T306 according to the system information, the UE shall move to CELL_FACH state and transmit a URA UPDATE message to the SS on the uplink CCCH. In this message, the value "periodic URA update" shall be set in IE" URA update cause". After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE"new C-RNTI", " new U-RNTI" and indicating the IE"URA Identity" to be "URA-ID 2" to the UE on the downlink DCCH. The UE finds that the indicated URA-ID is not included in the list of URA-IDs broadcasted, the UE shall retry to transmit a URA UPDATE message for N303 times. After that, the UE shall enter idle state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state at the start of the test. SS sets internal counter K to 1.
2		→	URA UPDATE	The message shall indicate "periodic URA update" in IE" URA update cause". This message is sent following the expiry of timer T306. SS increments counter K by 1.
3		←	URA UPDATE CONFIRM	The SS transmit this message and set IE"URA Identity" to "URA-ID 2" . When K greater than N303 proceeds to step 4, else SS waits for T303 to expires and executes step 2.
4				SS waits for a T306 to verify that no further URA UPDATE messages are transmitted by UE. The counter K shall be equal to (N303+1). The UE

Specific Message Contents

URA UPDATE CONFIRM (Step 4)

Use the same message sub-type defined in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
URA Identity	2

8.3.2.6.5 Test requirement

After step 1 the UE shall detect the expiry of timer T306, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH, setting value "periodic URA update" into IE" URA update cause".

After step 2 the UE shall retry to transmit a URA UPDATE message after it detects the confirmation error of URA-ID list for the URA-ID included in the URA UPDATE CONFIRM message.

After step 3 the UE shall stop transmitting URA UPDATE message and then enters idle state. The counter K shall be equal to (N303+1).

8.3.2.7 URA Update: Success after T303 timeout

8.3.2.7.1 Definition

8.3.2.7.2 Conformance requirement

The UE transmits a URA UPDATE message to the UTRAN when it needs to update UTRAN with the current URA identity stored the UE. When the UE fails to receive any URA UPDATE CONFIRM message after T303 timer expiry, it transmits a URA UPDATE message repeatedly at an interval of T303 timer value until its internal counter V303 is greater than N303.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.7.3 Test purpose

To confirm that the UE attempts to repeat the URA update procedure upon the expiry of timer T303. To confirm that a maximum of N303 re-transmission is performed.

8.3.2.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : URA_PCH

Test Procedure

The UE is in the URA_PCH. When the UE detects the expiry of timer T306 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH, setting value "periodic URA update" into IE" URA update cause". The SS ignores this message, the UE shall then retry to transmit a URA UPDATE message after the expiry of timer T303. SS continues to ignore further URA UPDATE message until it receives (N303+1) such message. Then it transmits a URA UPDATE CONFIRM message to the UE which includes IEs"new C-RNTI"," new U-RNTI". The UE shall then transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state at the beginning of test. SS sets counter K to 1. SS waits for T306 to expire.
2		→	URA UPDATE	This message shall contain value "periodic URA update" in IE" URA update cause" sent upon the expiry of timer T306.
3				SS increments K by 1.
4				If K is not greater than N303, SS transmits no response to the UE, waits for an additional period equals to T303 timer and returns to step 2. Else, SS executes step 5.
5		←	URA UPDATE CONFIRM	This message includes IEs" new C-RNTI" , "new U-RNTI"
6		→	RNTI REALLOCATION COMPLETE	

Specific Message Contents

URA UPDATE CONFIRM (Step 5)

Use the same message sub-type as in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
New U-RNTI SRNC Identity	'0000 0000 0001' Arbitrary 20-bit string which is different from S-RNTI field in IE"U-RNTI"
S-RNTI New C-RNTI	Arbitrary 16-bit string which is different the assigned C-RNTI in RRC CONNECTION SETUP message.

8.3.2.7.5 Test requirement

After step 1 the UE shall detect the expiry of timer T306, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH. The updating cause shall be set to "periodic URA update" in IE" URA update cause".

After step 2 the UE shall retry to transmit a URA UPDATE message at each expiry of timer T303. UE shall attempt to re-transmit N303 URA UPDATE messages.

After step 5 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

8.3.2.8 URA Update: Failure (V303 is greater than N303:T303 timeout)

8.3.2.8.1 Definition

8.3.2.8.2 Conformance requirement

The UE transmits a URA UPDATE message to the UTRAN when it needs to update the UTRAN with the current URA of the UE. When the UE fails to receive the URA UPDATE CONFIRM message , the UE transmits a URA UPDATE message repeatedly after every expiry of T303 until its internal counter V303 is greater than N303. If V303 is greater than N303, UE stops sending URA UPDATE message and then enters idle state.

Reference

3GPP TS 25.331 clause 8.3.2

8.3.2.8.3 Test purpose

To confirm that the UE retries to perform the URA update procedure upon expiry of timer T303 and moves to idle state after retrying for N303 times.

Initial Condition

System Simulator : 1 cell

UE : URA_PCH

Test Procedure

The UE is in the URA_PCH state. When the UE detects the expiry of timer T306 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. This message shall contain value "periodic URA update" in IE" URA update cause". SS ignores this message, the UE shall continue to transmit URA UPDATE messages for N303 times after the expiry of timer T303. After N303 re-transmissions, the UE shall enter idle state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state and SS sets counter K=0. SS wait until T303 expires.
2		→	URA UPDATE	The value "periodic URA update" shall be set in IE" URA update cause".
3				SS ignores the message, waits for T303 timer to expire and increments K by 1. If a message is received after T303 expiry, return to step 2. Else, go to step 4.
4				SS checks that K is equal to (N303+1).
5				The UE shall enter idle state.

Specific Message Contents

None

After step 1 the UE shall detect the expiry of timer T306, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH, setting "periodic URA update" into IE" URA update cause".

After step 2 the UE shall retry to transmit a URA UPDATE message after the expiry of timer T303. SS shall receive (N303+1) CELL UPDATE message. After this, the UE shall enter idle state.

8.3.3. RNTI reallocation

8.3.3.1 RNTI reallocation: Success

8.3.3.1.1 Definition

8.3.3.1.2 Conformance requirement

This procedure is used by the network to assign a new RNTI identity to the UE. It is initiated by the UTRAN when it sends an RNTI REALLOCATION message, which includes a new C-RNTI and/or U-RNTI on the downlink DCCH. The UE starts to use the new identities and transmits an RNTI REALLOCATION COMPLETE message to the UTRAN on the uplink DCCH.

Reference

3GPP TS 25.331 clause 8.3.3

8.3.3.1.3 Test purpose

To confirm that the UE starts to use the new identities after it receives an RNTI REALLOCATION message from the SS. To confirm that the UE use the new U-RNTI identity to calculate the applicable paging occasions.

[Editor's note] In this test case, it is assumed that the paging occasion during connected states can be determined using U-RNTI. From TS 25.304 Clause 8, this assumption cannot be confirmed. Further clarification is required regarding this issue.

8.3.3.1.4 Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_FACH

Test Procedure

Initially, the UE is in the CELL_FACH state and it has been assigned a C-RNTI and U-RNTI. The SS transmits an RNTI REALLOCATION message which includes new C-RNTI and U-RNTI to the UE. Then the UE shall transmit an RNTI REALLOCATION COMPLETE message as confirmation and transits to CELL_PCH state. SS pages the UE by sending a PAGING TYPE 1 message and specifying the newly assigned U-RNTI identity in this message. The UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH which includes the U-RNTI identical to that found in RNTI REALLOCATION message received in step 2. The CELL UPDATE message shall also contain IE "Cell update cause" with this IE set to "paging response". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes IE "DRX Indicator" set to value "No DRX" to the UE on the downlink DCCH. The UE shall return to CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of the UE is CELL_FACH state. UE has been allocated both C-RNTI and U-RNTI during RRC connection establishment phase.
2		←	RNTI REALLOCATION	Contains new C-RNTI and U-RNTI identities.
3		→	RNTI REALLOCATION COMPLETE	
4		←	PAGING TYPE 1	SS pages the UE using the new U-RNTI allocated in step 2.
5		→	CELL UPDATE	UE shall trigger cell updating. The message shall indicate the same U-RNTI assigned in the RNTI REALLOCATION message in step 2.
6		←	CELL UPDATE CONFIRM	IE"DRX indicator" is set to "No DRX".

Specific Message Content

RNTI REALLOCATION (Step 2)

Use the same message sub-type as in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0101 0101 0101 0101 0101'
New C-RNTI	'1010 1010 1010 1010'
DRX Indicator	DRX with cell updating

RNTI REALLOCATION COMPLETE (Step 3) Only the ~~message type~~ message type IE is checked in this message.

PAGING TYPE 1 (Step 4)

Use the same message sub-type as in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
Page Record List	
- Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0101 0101 0101 0101 0101'
BCCH modification info	Not Present

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0101 0101 0101 0101 0101'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Paging Response'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type as in TS 34.108 Clause 8.

8.3.3.1.5 Test requirement

After step 2 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH. The MAC PDU carrying this message shall comprise either the new C-RNTI or U-RNTI allocated in the "UE-id" field of the MAC header.

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE" Cell update cause" set to "paging response". The IE"U-RNTI" shall be identical to the IE"New RNTI" found in RNTI REALLOCATION message sent by the SS in step 2.

8.3.3.2 RNTI reallocation: Failure (Invalid message reception)

8.3.3.2.1 Definition

8.3.3.2.2 Conformance Requirements

When the UE receives an RNTI REALLOCATION message, which contains an error in one of the mandatory IE, it shall transmit a RNTI REALLOCATION FAILURE message on the DCCH using AM RLC and set the value "protocol error" in the IE"failure cause". The IE"protocol error information" in this message shall also be set to an appropriate value. The UE shall not utilize any identities relayed in the erroneous message, and it shall resume normal operations.

8.3.3.2.3 Test Purpose

To confirm that the UE ignore the new connected mode identities conveyed in an erroneous RNTI REALLOCATION message. To confirm that the UE report this event to the UTRAN by sending RNTI REALLOCATION FAILURE message, stating the appropriate failure cause and information.

8.3.3.2.4 Method of test

Initial Conditions

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is brought to CELL_FACH state. SS transmits a RNTI REALLOCATION message to the UE on the DCCH using UM-RLC mode. In this message, the IE"DRx Indicator" is set to one of the spare values. A new U-RNTI identity is also present in this message. The UE shall respond by transmitting the RNTI REALLOCATION FAILURE message, indicating "protocol error" in IE"failure cause" and also "Information element not comprehended" in IE"Protocol error information". After receiving the RNTI REALLOCATION FAILURE message, SS waits for a duration to allow T305 to expire. The UE shall transmit CELL UPDATE message with the original U-RNTI identity assigned. SS complete this test by sending CELL UPDATE CONFIRM message to the UE on the downlink DCCH.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of the UE is CELL_FACH state.
2		←	RNTI REALLOCATION	Contains a new U-RNTI identity, but a spare value is used in the IE"DRX indicator"
3		→	RNTI REALLOCATION FAILURE	UE shall transmit this message to report the error in RNTI REALLOCATION message. It shall include the appropriate cause in the message.
4				SS waits for a period up to timer T305 to allow the UE to start performing a cell updating procedure.
5		→	CELL UPDATE	UE shall trigger periodic cell updating. The message shall not contain the U-RNTI given in the RNTI REALLOCATION message in step 2.
6		←	CELL UPDATE CONFIRM	

Specific Message Content

RNTI REALLOCATION (Step 2)

Use the same message sub-type as in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI DRX Indicator	0000 0000 0001B 0000 0000 0000 0000 00011B Set to one of the spare value

RNTI REALLOCATION FAILURE (Step 3)

Information Element	Value/remark
Failure Cause Protocol Error Information	Check to see if set to 'Protocol error' Check to see if set to 'Information Element not comprehended'

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	Shall be the same as the original U-RNTI allocated Check to see if set to '0000 0000 0000 0001'B Check to see if set to '0000 0000 0000 0000 0000 0001'B
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell update cause	Check to see if set to 'Periodic Cell Updating'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type as in TS 34.108 Clause 8

8.3.3.2.5 Test Requirement

After step 2 the UE shall transmit RNTI REALLOCATION FAILURE message, indicating the value "protocol error" in IE"failure cause" and also "information element not comprehended" in IE"protocol error information". After step 4 the UE shall initiate a periodic cell updating procedure by transmitting CELL UPDATE message on the CCCH. In this message, the U-RNTI identity shall be set to the same value as assigned during the RRC connection establishment procedure.

8.3.4 Active set update in soft handover

8.3.4.1 Active set update in soft handover: Radio Link addition

8.3.4.1.1 Definition

8.3.4.1.2 Conformance requirement

Radio link addition is triggered in the network's RRC layer. The RRC entity in the network first configures the new radio link. Transmission and reception then begin immediately. This procedure is to update the active set of the connection between the UE and UTRAN. The UTRAN then transmits an ACTIVE SET UPDATE message to the UE. The UE configures layer 1 to begin reception for the additional radio link. After the UE receives confirmation from the physical layer in the UE, an ACTIVE SET UPDATE COMPLETE message is sent to the UTRAN.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.1.3 Test purpose

To confirm that the UE continues to communicate with the SS on both the additional radio link and an already existing radio link after the radio link addition.

8.3.4.1.4 Method of test

Initial Condition

System Simulator : 2cells - Cell 1 is active ,Cell 2 is active
UE : CELL_DCH in cell 1

Test Procedure

Initially, the UE establishes a radio access bearer in the CELL_DCH state in cell 1. The SS begins to configure the new radio link to be added from cell 2. Then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE" Radio Link Addition Information".(e.g.Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID). When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. After the UE confirms the synchronization with the new radio link from cell 2, the UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The UE continues to communicate with the SS on the both radio links. To test this condition, SS ceases the operations of all uplink and downlink DPCH from cell 1. SS shall observe that the data communication for both DCCH and DTCH channels continue as per normal using cell 2, as if cell 1 is still operational.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state in cell 1, after the successful establishment of a radio access bearer service.
2				The SS configures an additional radio link in the downlink direction from cell 2.
3		←	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE" Radio Link Addition Information". (e.g.Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1. SS ceases all Tx and Rx activities in cell 1. But it shall be able to communicate with UE through cell 2.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	P-CPICH can be used.
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary CPICH info	Not Present
- DL channelisation code	512
- Secondary scrambling code	For each DPCH, assign the same code number in the current code given in cell 1.
- CHOICE Spreading factor	Not Present
- Code Number	Not Present
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	Not Present

8.3.4.1.5 Test requirement

After step 3 the UE shall configures a new radio link to cell.2, with the connection on the old radio link in cell 1 remaining operational and unaffected. It shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure. After step 4 the SS shall continue to communicate with the UE using the radio links added to the UE from cell 2.

8.3.4.2 Active set update in soft handover : Radio Link removal

8.3.4.2.1

Definition

8.3.4.2.2

Conformance requirement

This procedure is to update the active set of the connection between the UE and the UTRAN after the UTRAN has commanded a removal of a radio link from the current active set. The UTRAN RRC transmits an ACTIVE SET UPDATE message to the UE RRC. The UE RRC requests UE L1 to terminate transmission and reception of the radio link to be removed. The UE shall continue to communicate normally with the UTRAN using the new active set, without losing the connection link. After this the UE acknowledges the radio link removal by sending an ACTIVE SET UPDATE COMPLETE message to the UTRAN on DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.2.3

Test purpose

To confirm that the UE continues to communicate with the SS on the remaining radio link after radio link removal on the active set.

8.3.4.2.4

Method of test

Initial Condition

System Simulator : 2cells - both Cell 1 and Cell 2 are active

UE : CELL_DCH in cell 1

Test Procedure

At the start of the test, the UE establishes a radio access bearer service in the CELL_DCH state in cell 1. This is followed by a radio link addition procedure in cell 2. SS then transmits an ACTIVE SET UPDATE message, which includes IE" Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed. When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The UE shall continue to communicate with the SS on the remained radio link in cell 2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL DCH state in cell 1. SS executes test 8. 3.4.1, and the UE shall update the active set to contain cell 1 and cell 2 after the radio link addition procedure.
2		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE" Radio Link Removal Information".
3		→	ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio link associated with cell 1.

4			The SS stops transmission on the downlink direction from cell 1 and the UE shall continue to communicate on the remaining radio link in cell 2.

Specific Message Contents

ACTIVE SET UPDATE

The message to be used in this test is the same as the message sub-type found in TS 34.108 clause 8, with the following exceptions:

Information Element	Value/remark
Radio link addition information	Not Present
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to the same P-CPICH scrambling code assigned for cell 1

8.3.4.2.5 Test requirement

After step 2 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

After step 3 the UE shall continue to communicate on the remaining radio link from cell 2.

8.3.4.3 Active set update in soft handover: Combined radio link addition and removal (active set is not full)

8.3.4.3.1 Definition

8.3.4.3.2 Conformance requirement

When radio links are to be replaced, the UTRAN RRC first configures the UTRAN L1 to activate the radio link(s) that are being added. The UTRAN RRC then transmits an ACTIVE SET UPDATE message to the UE RRC, which shall configure the UE L1 to terminate transmission and reception on the removed radio link(s) and begin transmission and reception on the added radio link(s). At the completion of the reconfiguration of radio links, the UE shall acknowledge the replacement with an ACTIVE SET UPDATE COMPLETE message.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.3.3 Test purpose

To confirm that the UE continues to communicate with the SS on the added radio link and removes radio link which exists prior to the execution of active set update procedure.

8.3.4.3.4 Method of test

Initial Condition

System Simulator : 2cells- Both Cell 1 and Cell 2 are active

UE :CELL_DCH in cell 1 [Active set is not full.]

Test Procedure

The UE establishes a radio access bearer in the CELL_DCH state in cell 1. SS begin to configure the new radio link in cell 2. Then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH

using AM RLC. The message includes IE" Radio Link Addition Information". and IE" Radio Link Removal Information", indicating the removal of cell 1 and addition of cell 2 into the active set. When the UE receives this message, the UE RRC shall terminate the transmission and reception of the removed radio link in cell 1 and then configures layer 1 to begin transmission and reception in cell 2. After the UE received confirmations from the physical layer regarding the update of active set, it transmits an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH to the SS. The UE shall continue to communicate with the SS on the added radio link in cell 2. When SS receives ACTIVE SET UPDATE COMPLETE message, it verifies that the UE has ceased any uplink transmission in cell 1.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in cell 1
2				The SS configures an additional radio link in cell 2, starting the transmission and reception of data in cell 2. Clause
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE" Radio Link Addition Information" for cell 2 and IE" Radio Link Removal Information" for cell 1.
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link in cell 2 and removes the old radio link in cell 1.
5				The SS removes the radio link from cell 1 and the UE shall continue to communicate on the added radio link in cell 2, and not transmit any data in cell 1.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- CHOICE Spreading factor	512
- Code Number	For each DPCH, assign the same code number in the current code given in cell 2.
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code assigned as for cell 1

8.3.4.3.5 Test requirement

After step 3 the UE shall remove the radio link in cell 1 and add the radio link in cell 2. Then the UE shall transmit an ACTIVE SET UPDATE COMPLETE message the uplink DCCH.

After step 4 the UE shall continue to communicate on the added radio link in cell 2. SS monitors the uplink direction to confirm that no data are designated for reception in cell 1.

8.3.4.4 Active set update in soft handover: Unsupported Configuration in the UE

8.3.4.4.1 Definition

8.3.4.4.2 Conformance requirement

If the UTRAN attempts to remove a radio link that is not currently present in the UE's active set, the UE transmits an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC and maintain its current communication status with the radio links.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.4.3 Test purpose

To confirm that the UE transmits an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC, following the reception of a message specifying the removal of a radio link unknown to the UE.

8.3.4.4.4 Method of test

Initial Condition

System Simulator : 2cells - Cell 1 is active, Cell 2 is active.

UE :CELL_DCH in cell 1.

Test Procedure

The UE establishes a radio access bearer in the CELL_DCH state in cell 1. SS requests for a radio link addition by executing the steps described in test case 8.3.4.1. The UE shall then include cell 2 into its active set and establish the transmission and reception capabilities related to cell 2. SS then transmits an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes IE" Radio Link Removal Information" This IE indicates that a cell with unknown P-CPICH scrambling code be removed from the active set. When the UE receives this message, it transmits an ACTIVE SET UPDATE FAILURE message which is set to "configuration unacceptable" in IE" failure cause" on the uplink DCCH using AM RLC to the SS, and continues to communicate on the existing radio links in cell 1 and cell 2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in cell 1.
2				SS commands the UE to perform a radio link addition procedure by executing the steps in test case 8.3.4.1. The UE shall respond accordingly. Both cell 1 and cell 2 should be found in the active set maintained by the UE.
3		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE" Radio Link Removal Information". This content of this IE indicates an unknown cell.
4		→	ACTIVE SET UPDATE FAILURE	The message shall state "configuration unacceptable" in IE"failure cause". UE shall continue to communicate normally with both cells

Specific Message Contents

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	Not Present
Radio link removal information	1 radio link to be removed
- Primary CPICH info	
- Primary scrambling code	Set to an unknown scrambling code not assigned to any cells.

ACTIVE SET UPDATE FAILURE (Step 4)

Information Element	Value/remark
Integrity check info	Not Checked
Failure cause	Check to see if it's set to 'configuration unacceptable'

8.3.4.4.5 Test requirement

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message, setting "configuration unacceptable" in IE" failure cause" and sent on the uplink DCCH using AM RLC.

After step 4 the UE shall continue to communicate on the radio links for both cell 1 and cell 2.

8.3.4.5 Active set update in soft handover: Combined radio link addition and removal (active set is full)

8.3.4.5.1 Definition

8.3.4.5.2 Conformance requirement

When the UE active set is full, the UE shall first remove the old radio link and then add the new radio link, after it receives an ACTIVE SET UPDATE message for the combined radio link addition and removal.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.5.3 Test purpose

To confirm that the UE removes one of existing radio links, which is indicated in an ACTIVE SET UPDATE message and continues to communicate on the added radio link.

8.3.4.5.4 Method of test

Initial Condition

System Simulator : 3 cells - Cell 1 , Cell 2, and Cell 3 are all active

UE :CELL_DCH in cell 1, cell 2 (The assumed maximum number for active set is 2.)

[Editor's Note] The maximum number of radio link (i.e. MaxRL) specified in CR328 of TS 25.331 is 8. However, if the UE capability is more inferior in this aspect, can the assumption above still stands?

Test Procedure

The UE establishes a radio access bearer in the CELL_DCH state in cell 1 and cell 2. The SS configures the new radio link in cell 3 and sends an ACTIVE SET UPDATE message on DCCH using AM. This message includes IE" Radio Link Addition Information" indicating cell 3 to be added into the active set, and IE" Radio Link Removal Information" indicating the removal of cell 1 from the active set. When the UE receives this message, it shall not report a failure but firstly removes the indicated radio link and then adds the new radio link. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message on the DCCH using AM RLC to the SS and continues to communicate with the SS on the added radio link and the remaining old radio link.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in cell 1 and cell 2.
2				The SS configures an additional radio link in for cell 3, and starts reception and transmission using cell 3.
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE" Radio Link Addition Information" and IE" Radio Link Removal Information". The contents of the IE dictate the addition of cell 3 into the active set and removal of cell 1 from it.
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link in cell 3 and removes the old radio link in cell 1.
5				The SS removes the radio link in cell 1. The UE shall continue to communicate on the added radio link in cell 3 and also the existing radio link in cell 2.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test case is identical to the same message sub-type found in TS 34.108 Clause 8clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 3
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
	Not Present
- Secondary scrambling code	512
- CHOICE Spreading factor	For each DPCH, assign the same code number in the current code given in cell3.
- Code Number	
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code assigned as for cell 1

8.3.4.5.5 Test requirement

After step 3 the UE shall remove the radio link in cell 1 and add the radio link in cell 3. Then the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.
After step 4 the UE shall continue to communicate on the added radio link in cell 3 and on the existing old radio link in cell 2. It shall cease all transmission to cell 1.

8.3.4.6 Active set update in soft handover: Incompatible simultaneous reconfiguration

8.3.4.6.1 Definition

8.3.4.6.2 Conformance Requirements

The UE shall keep its old configuration, when it receives an ACTIVE SET UPDATE message before it can complete an existing active set update procedure. The UE shall then transmit an RRC STATUS message on the DCCH using AM RLC with value "Message not compatible with receiver state" set in IE" Protocol error cause". Then the UE shall continue to update its active set as if the second ACTIVE SET UPDATE message has not been received.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.6.3 Test Purpose

To confirm that the UE resumes the prior active set update request, when it receives a subsequent ACTIVE SET UPDATE before it has completely executed the first update procedure. To confirm that the UE transmits a RRC STATUS message to report the detection of "incompatible simultaneous reconfiguration" condition.

Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active

UE : CELL_DCH in cell 1 and cell 2

The UE establishes a radio access bearer in CELL_DCH state in cell 1 and cell 2. SS transmits an ACTIVE SET UPDATE message to request for the removal of cell 1 from the active list. When the UE sends an acknowledgement for this message from its RLC entity, SS immediately transmits a second ACTIVE SET UPDATE message, which specifies that cell 1 to be added into the active list. The UE shall react by transmitting RRC STATUS message on the DCCH using AM-RLC mode. In this message, the IE "Protocol error cause" shall be set to "Message not compatible with receiver state". Subsequently, the UE shall transmit the ACTIVE SET UPDATE COMPLETE message when the reconfiguration from the earlier active set update is completed. When SS receives this message, it verifies that UE continues to communicate with the SS on the radio link in cell 2.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in both cell 1 and cell 2.
2		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC, requesting for cell 1 to be removed from the active set.
3		←	ACTIVE SET UPDATE	Immediately after UE acknowledges the message in step 2, SS transmits this message. This message specifies that cell 1 be added into the active set.
4		→	RRC STATUS	UE shall transmit this message with the IE "Protocol Error Cause" set to "Message not compatible with receiver state"
5		→	ACTIVE SET UPDATE COMPLETE	UE shall transmit this message to signal the completion of the active set update.
6				UE shall cease all communication with cell 1 and continue to communicate with cell 2 only.

Specific Message Contents

ACTIVE SET UPDATE (Step 2)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	Not Present.
Radio link removal information	
- Primary CPICH info	
- Primary scrambling code	Set to the P-CPICH scrambling code assigned to cell 1.

ACTIVE SET UPDATE (Step 3)

Information Element	Value/remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - DL channelisation code - Secondary scrambling code - CHOICE Spreading Factor - Code Number - TPC Combination Index - SSDT Cell Identity - Close loop timing adjustment mode - TFCI Combining Indicator - Secondary CCPCH Info - TFCS - FACH/PCH information - Reference to other system information blocks Radio link removal information	Set to same code as assigned for cell 1 P-CPICH can be used. Not Present This IE is repeated for all existing downlink DPCHs allocated to the UE Not Present 512 For each DPCH, assign the same code number in the current code given in cell 1. Not Present Not Present Not Present Not Present Not Present Not Present Not Present Not Present Not Present Not Present
RRC STATUS	
Information Element	Value/remark
Protocol Error Cause	Check if it's set to 'Message not compatible with receiver state'

8.3.4.6.5 Test Requirement

After step 3 the UE shall report the “incompatible simultaneous reconfiguration” error by transmitting RRC STATUS message on the DCCH. In this message, the value “Message not compatible with receiver state” shall be set in IE”Protocol error cause”.

After step 4 the UE shall transmit ACTIVE SET UPDATE COMPLETE message on the uplink DCCH of cell 2.

After step 5 the UE shall continue to communicate normally with the SS using the radio link from cell 2.

8.3.4.7 Active set update in soft handover: Invalid Message Reception

8.3.4.7.1 Definition

8.3.4.7.2 Conformance Requirement

The UE shall keep its old configuration when the UE receives an ACTIVE SET UPDATE message, which omits a conditional IE. It shall transmit a ACTIVE SET UPDATE FAILURE message which set value “protocol error” in IE” failure cause” and also value “Conditional information element error” in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.7.3 Test Purpose

To confirm that the UE retains its active set list when it receives an ACTIVE SET UPDATE message, with a conditional IE missing in the message.

8.3.4.7.4 Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active.

UE : CELL_DCH in cell 1 (Integrity protection algorithm is not applied at the start of test)

Test Procedure

The UE establishes a radio access bearer in CELL_DCH in cell 1. SS requests that cell 2 be added into the active set by performing the steps described in test cases 8.3.4.1. The UE shall react accordingly and incorporate cell 2 into its active set. SS transmits an ACTIVE SET UPDATE message , with both IE”Integrity

check info" and IE"Integrity protection mode info" present in the message. This message also commands the starting of integrity mode protection. However, the IE"integrity protection initialisation number" is omitted. The UE shall detect that it has received an invalid message. It shall then send a ACTIVE SET UPDATE FAILURE message, stating the reason "Conditional information element error" in the IE"Protocol error information". The UE shall not remove cell 1 from its current active set.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
2				SS executes the steps in test case 8.3.4.1. The UE shall add cell 2 into its active set.
3		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE"Integrity check info" and IE"Integrity protection mode info". This message indicates that integrity mode protection be started but omit the IE"integrity protection initialisation number". The message also specifies that cell 1 be removed from the active set.
4		→	ACTIVE SET UPDATE FAILURE	The message shall state "conditional information element error" in IE"protocol error information". UE shall continue to communicate normally with both cells.

Specific Message Contents

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Integrity Check Info - Message authentication code - RRC Message sequence number	Set to an arbitrary 32-bits string Set to an arbitrary integer between 0 and 15
Integrity Protection Mode Info - Integrity protection mode command - Downlink integration protection activation info	Start Not Present
- Integrity protection algorithm - Integrity protection initialisation number	Standard UMTS Integrity Algorithm UIA1 Not Present
Radio link addition information	Not Present
Radio link removal information - Primary CPICH info - Primary scrambling code	Set to the P-CPICH scrambling code assigned to cell 1.

ACTIVE SET UPDATE FAILURE (Step 4)

Information Element	Value/remark
Protocol Error Information - Protocol Error Cause	Check to see if it's set to 'Conditional information element error'

8.3.4.7.5 Test Requirement

After step 3 the UE shall report a protocol error by transmitting the ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "Conditional information element error" shall be set in IE"Protocol Error Information". The UE shall continue to communicate normally with the SS using cell 1 and cell 2.

8.3.5 Hard Handover

[Editor's note : This test is included in the "Physical channel reconfiguration" , "Radio bearer establishment" , "Radio bearer reconfiguration" , "Radio bearer release" and " Transport channel reconfiguration".]

8.3.6 Inter system hard handover to UTRAN

[Editor's note : This test is FFS until R2000 core specification will be defined.]

8.3.7 Inter system hard handover from UTRAN

[Editor's note : This test is FFS until R2000 core specification will be defined.]

8.3.8 Inter system cell reselection to UTRAN

[Editor's note : This test is FFS until R2000 core specification will be defined.]

8.3.9 Inter system cell reselection from UTRAN

[Editor's note : This test is FFS until R2000 core specification will be defined.]

8.4 Measurement procedure

8.4.1 Measurement Control and Report

8.4.1.1 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.1.1 Definition

8.4.1.1.2 Conformance requirement

After a state transition from idle mode to CELL_DCH state, the UE shall continue to monitor the list of neighbouring cells which is specified in the SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages on BCCH. The UE shall send a MEASUREMENT REPORT message when reporting criteria are satisfied. During CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, it shall terminate existing monitoring activities for the neighbouring cells previously known from SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages. It shall perform the measurement and reporting tasks based on the latest MEASUREMENT CONTROL message received.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.1.3 Test Purpose

To confirm that the UE continue to monitor CPICH RSCP measurement quantity of the neighbour cells after it has entered the CELL_DCH state from idle mode. When the criteria specified in BCCH have been met, it shall report the measurements to the SS using MEASUREMENT REPORT messages. To confirm that in CELL_DCH state, the UE respond to a modification of measurement criteria and adjust its measurement and reporting mechanism accordingly. To confirm that the UE terminates monitoring and measurement activities for the neighbour cells found in SYSTEM INFORMATION BLOCK TYPE 11 (or 12) message, after it has received a MEASUREMENT CONTROL message which specifies the measurement type to be "intra-frequency measurement". To confirm that the UE restart the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.

8.4.1.1.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and the downlink P-CPICH has a transmission level (RSCP) of – 40 dBm, cell 2 is also active but with a P-CPICH transmission power 10dB below cell 1.

UE : idle state after having successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 11 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = "intra-frequency measurement", measurement quantity = "CPICH RSCP", report criteria = "periodic reporting criteria", reporting interval = "12 seconds". SS pages the UE with the cause "Incoming circuit-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates uplink and downlink DPDCH physical resources to the UE. UE then moves to CELL_DCH state. After approximately 12 seconds, the UE shall transmit a MEASUREMENT REPORT message with measurement readings from cell 2. SS waits for 25 seconds after the sending of RRC CONNECTION SETUP message to verify that 2 consecutive MEASUREMENT REPORT messages are received. Then SS modifies the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages. The measurement parameters for cell 2 are changed in the following manner: report criteria = "event-trigger", event identity = "1f", reporting threshold = "-65 dBm". SS then begins to decrease the transmission power of P-CPICH in cell 2 progressively at the rate of 0.5dB/sec. SS checks to see that no MEASUREMENT REPORT messages are sent within the next 12 seconds (which is due to periodic reporting). The UE shall detect this change and discontinue the periodic reporting of RSCP value estimation

from cell 2. After approximately 35 seconds later, the UE shall transmit MEASUREMENT REPORT message to indicate that the RSCP of cell 2 has reached the threshold specified. In this message, the correct measurement identity shall be stated. Finally, SS sends a MEASUREMENT CONTROL message to request a periodic reporting of measurement quantity P-CPICH Ec/No from cell 2. The reporting interval is set to 32 seconds. Within the MEASUREMENT CONTROL message, a new measurement identity is assigned. After receiving this message, the UE shall stop reporting quantity P-CPICH RSCP of cell 2. Moreover, the UE shall start to transmit MEASUREMENT REPORT messages with the contents pertaining to new measurement identity on cell 2's P-CPICH Ec/No.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 11	The UE is idle mode and camped onto cell 1. Cell 2 is also active but the P-CPICH has a RSCP 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		←→	RRC CONNECTION SETUP	SS allocates DPCH physical channels to UE
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_DCH state.
6		→	MEASUREMENT REPORT	SS waits for 25 seconds. It shall receive 2 consecutive MEASUREMENT REPORT messages
7		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	SS modifies the contents of system information, so that measurement for cell 2 is changed to "event trigger" with "event identity" set to 1f. SS then reduces the transmission power of cell 2's P-CPICH progressively by 0.5dB/sec.
8				SS monitors the DCCH for the next 12 seconds to make sure that no further MEASUREMENT REPORT messages are transmitted.
9		→	MEASUREMENT REPORT	UE shall transmit this message approximately 35 seconds after step 7, as its internal estimation of the RSCP of cell 2 has dropped below the threshold.
10		←	MEASUREMENT CONTROL	A new measurement identity is assigned, with the reporting quantity changed to cell 2's P-CPICH Ec/No

11	→	MEASUREMENT REPORT	SS verifies that UE transmits MEASUREMENT REPORT messages periodically to report the P-CPICH Ec/No value of cell 2.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 11 (Step 1)

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	1
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-115dB
- Qrxlevmin	-20dB
- Intra-frequency measurement quantity	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity	
- Intra-frequency measurement for RACH reporting	No report
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	
- Reporting information for state CELL_DCH	No report
- Intra-frequency reporting quantity	FALSE
- Reporting quantities for active set cells	FALSE
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	
- Pathloss	No report
- CFN-SFN observed time difference	TRUE
- Reporting quantities for monitored set cells	FALSE
- SFN-SFN observed time difference	TRUE
- Cell identity	
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	Not present
- CFN-SFN observed time difference	Periodical reporting criteria
- Reporting quantities for unlisted cells	Infinity
- CHOICE report criteria	12 seconds
- Amount of reporting	Not present
- Reporting interval	
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	Not Present

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content, which is marked as "Transition to CELL_DCH".

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 1
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if within acceptable range
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MASTER INFORMATION BLOCK (Step 7)

Information Element	Value/Remarks
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 12 (Step 7)

Information Element	Value/Remark

Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	2
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	FALSE
- CPICH Ec/No	TRUE
- CPICH RSCP	
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	Event type 1f
- Triggering condition	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- W	Not present
- Hysteresis	0.5dB
- Threshold Used Frequency	-65dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present-65dBm
- Reporting Threshold	0
- Time to trigger	Infinity
- Amount of reporting	8 seconds
- Reporting Interval	Not Present
- Reporting Cell Status	Not present
- Inter-frequency measurement system information	
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 2
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if this is below threshold value specified
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- Intra-frequency event identity	Check to see if this is set to event '1f'
- Cell measured event results	
- Primary CPICH Info	
- Primary scrambling code	Check to see if it's set to cell 2's assigned scrambling code

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	Same as in default message content
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds

MEASUREMENT REPORT (Step 11)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 3
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

8.4.1.1.5 Test Requirement

After step 5 the UE shall start to transmit MEASUREMENT REPORT message. The measurement quantity "CPICH RSCP" shall be reported to the SS at 12 seconds interval.

After step 7 UE shall not transmit any MEASUREMENT REPORT messages within 12 seconds after SS has modified the MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages. The UE shall transmit a MEASUREMENT REPORT message roughly 35 seconds after step 7, to report that the RSCP value for cell 2 has dropped below the threshold.

After step 10 the UE shall transmit MEASUREMENT REPORT messages at 32 seconds interval, with the IE"Measurement Identity" set to 3. The message shall also include an estimation of cell 2's P-CPICH Ec/No value.

8.4.1.2 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.2.1 Definition

8.4.1.2.2 Conformance requirement

After entering CELL_DCH state from idle mode, the UE shall discontinue the monitoring of the list of neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE ~~12 (or 11)~~ messages on BCCH.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.2.3 Test Purpose

To confirm that the UE terminates the monitoring of the list of neighbouring cell assigned in the IE"inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE ~~12 (or 11)~~ messages, after it enters CELL_DCH state from idle mode.

8.4.1.2.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a downlink transmission level (RSCP) of –50 dBm, cell 2 is also active but with a transmission power 20dB below cell 1. The carrier frequency of cell 2 in the uplink direction is 1 UARFCN above that of cell 2, and the downlink carrier is 1 UARFCN below that of cell 1.
UE : idle state by has successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH RSCP". SS pages the UE with the cause "Incoming circuit-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocate uplink and downlink DPDCH physical resources to the UE. UE then moves to CELL_DCH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from cells belonging to the monitored set.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE ~~12~~ <u>11</u>	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 20dB below that of cell 1. SYSTEM INFORMATION TYPE ~~12~~ <u>11</u> to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		~~←~~ →	RRC CONNECTION SETUP	SS allocates DPDCH physical channels to UE, using compressed mode fo ~~r~~ mat

5	→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the RRC CONNECTION SETUP message and moves to CELL_DCH state.
6			SS raises the transmission power of cell 2 by 10dB. SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 1211

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	Not Present
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	Set to the next uplink UARFCN after cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20 dB, -115dBm
- Inter-frequency measurement quantity CHOICE Reporting criteria	Inter-frequency reporting criteria
- Filter coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	2.0dB
- Hysteresis	0 sec
- Time to trigger	Infinity
- Amount of reporting	0
- Reporting interval	Not Present
- Parameters required for each non used frequency	
- Threshold non-used frequency	-55dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content which is marked as "Transition to CELL_DCH", with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- Scrambling code change	2.0
- Downlink frame type	1.0
- DeltaSIR	
- DeltaSIRAfter	

8.4.1.2.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity from cell 2.

8.4.1.3 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

During a transition from idle mode to CELL_FACH state, the UE shall start to monitor neighbouring cells listed in the IE "Intra-frequency cell info" received in SYSTEM INFORMATION BLOCK TYPE 12 (or 11). If a measurement report criteria is also specified, the UE shall store this information and apply these rules when deciding to transmit MEASUREMENT REPORT messages during a subsequent transition to CELL_DCH state. If reporting during RACH transmissions are dictated by the UTRAN, the UE shall append the relevant measurement information when sending messages on RACH (e.g. RRC CONNECTION REQUEST and CELL UPDATE).

Reference

3GPP TS 25.331, clause 8.4.1.9

8.4.1.3.3 Test Purpose

To confirm that the UE begins to monitor the neighbouring cells in the monitored list after it has entered the CELL_FACH state. The list of neighbouring cell can be known from SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages. If information regarding the intra-frequency measurement report criteria is also broadcasted, the UE shall save this information and apply the criteria during a subsequent transition to

CELL_DCH state. If RACH measurement reporting is dictated in SYSTEM INFORMATION BLOCK TYPE ~~12~~~~(or 11)~~ messages, the UE shall include these measurements when transmitting on the RACH channel.

8.4.1.3.4 Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active. Cell 2 is transmitting at 15 dB below cell 1.
UE : idle state and camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = “intra-frequency measurement”, measurement quantity = “CPICH Ec/No”, report criteria = “periodic reporting criteria”, reporting interval = “12 seconds”. In the system information message, reporting of CPICH Ec/No is also required for intra-frequency reporting when transmitting RACH messages to cell 1.

SS pages the UE with the cause “Incoming packet-switched call”. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH (FACH) physical channels for uplink and downlink use. UE shall then enter CELL_FACH state. SS waits until timer T305 expires, the UE shall send a CELL UPDATE message including the measurement reading of cell 2's CPICH Ec/No values. SS then reply with CELL UPDATE CONFIRM message without changing the physical channel resources.

In the next sequence, SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates DPDCH channels to the UE. The UE shall transit to CELL_DCH state and send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcasted on SYSTEM INFORMATION BLOCK TYPE ~~12~~~~(or 11)~~ when the UE was still in idle mode.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 2, SYSTEM INFORMATION BLOCK TYPE ~~12~~ ~~11~~	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 15dB below that of cell 1. SYSTEM INFORMATION TYPE 2 and ~~12~~ ~~11~~ to be transmitted are different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE, stating the cause as an incoming packet-switched call.
3		→	RRC CONNECTION REQUEST	The Ec/No value of P-CPICH of Cell 1 should be reported.
4		←	RRC CONNECTION SETUP	SS allocates common physical channels to UE.
5		→	RRC CONNECTION COMPLETE	UE shall enter CELL_FACH state, transmits this message to acknowledge the SETUP message.
6				SS waits for 5 minutes (for the expiry of T305 timer), so that UE will initiate a periodic cell updating procedure.
7		→	CELL UPDATE	This message shall contain measurement readings of CPICH Ec/No for cell 1.
8		←	CELL UPDATE CONFIRM	SS does not change the physical channel allocation.

9	←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns DPCH physical resources to the UE, but keeping parameters for transport channels and RBs unchanged.
10	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state after sending this message.
11	→	MEASUREMENT REPORT	UE shall begin to report cell 2's CPICH Ec/No value periodically at 12 seconds interval. The measurement identity shall match that broadcasted in step 1

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 2

Information Element	Value/Remarks
UE Timers and constants in connected mode - T305	5 minutes.

SYSTEM INFORMATION BLOCK TYPE [1211](#)

Information Element	Value/Remark
Reference to other system information blocks	
FACH measurement occasion info	
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	5
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin - Intra-frequency	-20dB, -115dBm
measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	12 seconds
- Reporting Cell Status	Not Present
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	

PAGING TYPE 1

Information Element	Value/Remarks
Paging record list	
- Paging Record	
- CHOICE Paging originator	CN Originator
- Paging cause	Terminating PS Data Call,
- CN domain identity	PS Domain
- CHOICE UE identity	IMSI (DS-41)
- IMSI (DS-41)	Set to the same IMSI (DS-41) digits found in the test USIM.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Initial UE Identity	Check to see if it is the same as in PAGING TYPE 1 message
Establishment cause	Check to see if set to "Paging Response"
Measured results on RACH - Measured result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measured results for monitored cells	Check to see if value is present Check to see if this IE is absent

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if set to same U-RNTI value assigned in RRC CONNECTION SETUP message.
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell update cause	Check to see if set to 'Periodic cell updating'
Protocol error indicator	Check to see if set to 'FALSE'
Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No	CPICH Ec/No Checked to see if set to within an acceptable range.
- Measurement results for monitored cells	Checked to see if this IE is not present.
Protocol error information	Check to see if set to 'FALSE'

PHYSICAL CHANNEL RECONFIGURATION

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH".

MEASUREMENT REPORT

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results - CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is within acceptable range
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check ~~kk~~ to see if this IE is absent

8.4.1.3.5

Test Requirement

After step 3 the UE shall send RRC CONNECTION REQUEST message in response to the paging message sent by the SS, which includes reading of the current cell's CPICH Ec/No value.

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages.

After step 6 the UE shall initiate cell updating procedure by transmitting CELL UPDATE message. In this message, the cause shall be set to "periodic cell updating". It shall include measurement readings for the current cell (cell 1) CPICH Ec/No measurement quantity.

After step 10 the UE shall move to CELL_DCH state and transmit MEASUREMENT REPORT messages at 12 seconds interval. In these messages, neighbouring cell 2's CPICH Ec/No value shall be reported. The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in SYSTEM INFORMATION BLOCOK TYPE ~~12~~11 messages transmitted in step 1.

8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.4.1 Definition

8.4.1.4.2 Conformance requirement

After entering CELL_FACH state from idle mode, the UE shall start to monitor the list of “inter-frequency” neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE ~~12~~(~~or~~11) messages on BCCH/FACH.

Reference

3GPP TS 25.331, clause 8.4.1.10

8.4.1.4.3 Test Purpose

To confirm that the UE begins to monitor the list of neighbouring cell assigned in the IE“inter-frequency cell info” in SYSTEM INFORMATION BLOCK TYPE ~~12~~(~~or~~11) messages, after it enters CELL_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

8.4.1.4.3 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a downlink transmission level for CPICH RSCP at -40 dBm, cell 2 is also active but with a transmission power 10dB below cell 1. The carrier frequency of cell 2 in the uplink direction is 1 UARFCN above that of cell 2, and the downlink carrier is 1 UARFCN below that of cell 1.

UE : idle state and has successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list for inter-frequency measurement type. The key measurement parameters are as follow: measurement type = “inter-frequency measurement”, measurement quantity = “CPICH Ec/No”.

SS pages the UE with the cause “Incoming packet-switched call”. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH channel in the uplink and S-CCPCH(FACH) channel on the downlink to the UE. UE then moves to CELL_FACH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from inter-frequency cells belonging to the monitored set. SS decreases the transmission power of CPICH in cell 1 by 10dB. At the same time, it raises the corresponding downlink transmission power of cell 2 by 10dB. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to report this event. Upon receiving this message, SS replies with the default CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE ~~12~~ <u>11</u>	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 10dB below that of cell 1. SYSTEM INFORMATION TYPE ~~12~~ <u>11</u> to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	

4	←	RRC CONNECTION SETUP	SS allocates PRACH and S-CCPCH resources to UE
5	→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_FACH state.
6			SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.
7			SS decreases the transmission power of cell 1 by 10dB and increases cell 2's downlink power by 10dB.
8	→	CELL UPDATE	UE shall detect that cell 2 has become stronger than cell 1. It sends this message after reselecting to cell 2
9	←	CELL UPDATE CONFIRM	Use default message.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

| SYSTEM INFORMATION BLOCK TYPE 1211

~~clause~~ Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	Set to the next uplink UARFCN after cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-frequency measurement quantity	
CHOICE Reporting criteria	Inter-frequency reporting criteria
- Filter coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	2.0dB
- Time to trigger	0 sec
- Amount of reporting	Infinity
- Reporting interval	0
- Parameters required for each non used frequency	Not Present
- Threshold non-used frequency	-55dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

PAGING TYPE 1

For this message, use the same message contents as in step 2 of clause 8. 4.1.3.3.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content defined in TS 34.108 Clause 8, which is marked as "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the message sub-type in default message content defined in TS 34.108 Clause 8.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity for cell 2.

After step 7 the UE shall reselect to cell 2 and transmit a CELL UPDATE message on the uplink CCCH of cell 2.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.5.1 Definition

8.4.1.5.2 Conformance requirement

After entering CELL_FACH state from CELL_DCH state, the UE shall terminate intra-frequency type measurement reporting originating from a previous MEASUREMENT CONTROL message. If indicated in the system information messages, the UE shall start to monitor neighbouring cells. The UE shall apply the reporting criteria specified in system information during a subsequent return to CELL_DCH state. If requested to perform measurement reporting on RACH channels, the UE shall append the measured results when transmitting uplink RACH messages.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.5.3 Test Purpose

To confirm that the UE ceases to perform intra-frequency measurement specified in a previously received MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state. To confirm that the UE read the system information when in CELL_FACH state and starts to monitor the neighbouring cells as indicated in system information messages. To confirm that the UE performs measurements on uplink RACH channel and append the measured results in RACH messages, when requested in the system information messages.

8.4.1.5.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, but the transmitter of cell 3 is switched off. Cell 1 is transmitting its CPICH (RSCP) at 20 dB above cell 2. The downlink UTRA carriers transmission strength for cell 1 is identical to that of cell 2.

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode and has selected cell 1 as the current cell. SYSTEM INFORMATION BLOCK TYPE 12 message is modified from its default message contents, in order to prevent the reporting of CFN-SFN difference. No measurement requirements are specified for the UE in system information block (type 11 and 12) messages.

SS then prompts the test operator to initiate an outgoing call. When UE transmits a RRC CONNECTION REQUEST message on RACH, SS replies with RRC CONNECTION SETUP message. Uplink and downlink DPDCH physical channels are allocated. Upon receiving RRC CONNECTION SETUP message, the UE shall transmit RRC CONNECTION SETUP COMPLETE message on DCCH and then moves to CELL_DCH state. SS then sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement, based on an estimation of cell 2's CPICH Ec/No. At the same time, reporting of cell 2's CPICH is commanded with the reporting criteria set to "periodic reporting" and reporting interval set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message, triggering a switch of transport channels from DCH/DCH to RACH/FACH. After receiving this message, the UE shall reconfigure itself and replies with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS acknowledges this message and the UE shall move to CELL_FACH state and read the system information messages. SS monitors the uplink to verify that no MEASUREMENT REPORT messages are received. In SYSTEM INFORMATION BLOCK TYPE 12 message, SS includes cell 3 into the neighbour cells monitoring list. IE "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in this message. An event-triggered (event type 1a) reporting criterion is specified for intra-frequency measurements. The transmission strength of CPICH for cell 3 is increased until it exceeds the lower bound of the reporting range specified. SS then pages for the UE using PAGING TYPE 1 message. The UE shall respond with a CELL UPDATE message, which comprises CPICH Ec/No measurements for cell 1 and 3. Upon the receipt of CELL UPDATE message, SS replies with CELL UPDATE CONFIRM message. This message does not change the physical resource nor allocate any new RNTI identities. The UE shall remain in CELL_FACH state. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, this time specifying dedicated physical resources for both uplink and downlink direction. The UE shall then send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages. SS verifies that all messages received pertain to the periodic measured value of cell 2's CPICH Ec/No value. UE shall not send any reports containing the measured values of cell 3.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and test operator is asked to make an outgoing call.
2		→	RRC CONNECTION REQUEST	
3		←	RRC CONNECTION SETUP	Uplink and downlink DPCH resources are allocated.
4		→	RRC CONNECTION SETUP COMPLETE	UE shall move to CELL_DCH state.
5		←	MEASUREMENT CONTROL	SS requests for measurement and reporting of cell 2's CPICH Ec/No value.
6		→	MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval. SS waits for 2 consecutive reports before proceeding to step 7.
7		←	PHYSICAL CHANNEL RECONFIGURATION	SS switches the physical resources to common physical channels.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall reconfigure its uplink and downlink channels before transiting to CELL_FACH state.
9		←	SYSTEM INFORMATION BLOCK TYPE 12	SS includes cell 3 into the monitored neighbour cell list. SS waits for 1 minutes and verifies that no MEASUREMENT REPORT messages are received. Cell 3 is switched on, and SS adjusts the transmission power for CPICH such that its Ec/No falls into the report range specified.
10		←	PAGING TYPE 1	SS pages for UE using the assigned U-RNTI identity.
11		→	CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and 3 appended.
12		←	CELL UPDATE CONFIRM	No change in physical resource allocation and RNTI identities.
13		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates dedicated physical channels.
14		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
15		←	MEASUREMENT REPORT	UE shall continue to report cell 2's CPICH Ec/No value on a periodic basis.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Transition to CELL_DCH”.

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	5
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	
- CHOICE measurement	Check to see if set to “Intra-frequency measured results list”
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Packet to CELL_FACH from CELL_DCH in PS)”

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	6
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	Only 1 reporting event is defined
- Intra-frequency event identity	1a
- Triggering condition	Monitored set cells
- Reporting range	10.0 dB
- Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- Reporting Threshold	Not Present
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting Interval	8 seconds
- Inter-frequency measurement system information	Not present
- Inter-system measurement system information	Not present
- Traffic volume measurement system information	Not present
- UE internal measurement system information	Not present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

PAGING TYPE 1

Information Element	Value/Remarks
Page Record List - Page Record - CHOICE Paging originator - U-RNTI BCCH modification info	UTRAN Originator Set to same U-RNTI value as assigned in the RRC CONNECTION SETUP message Not Present

CELL UPDATE

Information Element	Value/Remarks
U-RNTI Integrity check info AM_RLC error indication (for C-plane) AM_RLC error indication (for U-plane) Cell update cause Protocol error info Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measurement results for monitored cells - SFN-SFN observed time difference - Primary CPICH info - Primary scrambling code - CHOICE measurement quantity - CPICH Ec/No Protocol error information	Check to see if same to value as in PAGING TYPE 1 message Check to see if it is absent Check to see if it is set to FALSE Check to see if it is set to FALSE Check to see if it is set to "Paging Response" Check to see if it is absent or set to FALSE Check to see if set to CPICH Ec/No Check to see if it is within acceptable range Not Checked Check to see if the same as cell 3's code. Check to see if set to CPICH Ec/No Check to see if it is within acceptable range Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH in PS")

MEASUREMENT REPORT (Step 15)

The contents of this message should be the same as in step 6.

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval.

The message shall contain the measured result of cell 2's CPICH Ec/No value.

After step 8, the UE shall not send any MEASUREMENT REPORT messages which report quantities requested in MEASUREMENT CONTROL messages in step 5.

After step 10, the UE shall respond to the paging and transmit a CELL UPDATE message. In this message, the measured values CPICH Ec/No for cell 1 and cell 3 shall be included.

After step 14, the UE shall revert to the original measurement reporting mechanism and send MEASUREMENT REPORT messages containing estimates for cell 2's CPICH Ec/No value. The UE shall not transmit any MEASUREMENT REPORT messages, which indicate measurement quantities of cell 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

When transiting from CELL_DCH state to CELL_FACH state, the UE shall terminate all reporting activities related to inter-frequency measurements. After reaching CELL_FACH state, the UE shall begin to monitor neighbouring cells listed in the IE "inter-frequency cell info" of the system information type 12 message.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.6.3 Test Purpose

To verify that UE ceases to transmit MEASUREMENT REPORT messages when moving from CELL_DCH state to CELL_FACH, even if it has detected that reporting criteria have been satisfied in CELL_FACH state.

To verify that the UE extracts information for inter-frequency measurement from system information messages after reaching CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

SS: 2 cells – Cell 1 is active while cell 2 is inactive. Cell 2 is allocated a frequency which is 1 UARFCN away from cell 1 in both uplink and downlink directions. The applicable radio conditions for cell 1 and cell 2 are as follow:

	Cell 1	Cell 2
UARFCN (N_u and N_d)	Channel 1	Channel 2
CPICH RSCP	-75 dBm	-85 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm
S	15	5

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode. SS pages the UE with the establishment cause set to “Terminating PS Data Call”. The SYSTEM INFORMATION TYPE 12 message is modified so that no measurement tasks are to be performed by the UE. The UE shall respond to the paging by sending a RRC CONNECTION REQUEST message on the PRACH. Upon receiving this message, SS allocates dedicated DPDCH physical channels to the UE by transmitting RRC CONNECTION SETUP message. The UE shall reply by transmitting a RRC CONNECTION SETUP COMPLETE message. SS then checks the IE “Measurement Capability” of this message and verifies that the UE is capable of performing inter-frequency measurements under FDD mode. After the confirmation of the UE inter-frequency measurement ability, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, information related to the radio bearers and uplink/downlink radio resources remain unchanged as compared to the equivalent IEs found in RRC CONNECTION SETUP message. The only difference concerns IE “DPCH compressed mode info”, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS then send a MEASUREMENT CONTROL message to the UE, specifying that cell 2 be the measurement object for inter-frequency type measurement. The periodic reporting criterion is selected for this measurement. SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing measured result of cell 2’s reporting quantity (CPICH E_c/N_0). SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, requesting the UE to switch its uplink and downlink DPDCH to common physical channels. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then moves to CELL_FACH state. SS waits for another 8 seconds to detect any possible uplink MEASUREMENT REPORT messages as a result of inter-frequency measurements. SS then increases the transmission power of cell 2 by 20 dBm. SS waits for [x] seconds to allow the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 2, specifying the cause as “cell re-selection”. SS replies with CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and camped onto cell 1. SYSTEM INFORMATION BLOCK TYPE 12 is redefined, disabling all measurement and reporting activities.
2		←	PAGING TYPE 1	SS pages UE with cause set to "incoming circuit-switched call"
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	Uplink and downlink DPDCH resources are allocated.
5		→	RRC CONNECTION SETUP COMPLETE	UE shall indicate that it's capable of performing inter-frequency measurement for FDD mode.
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall enter CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that cell 2 be monitored. SS waits for 8 seconds.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 2's CPICH Ec/No value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS changes the physical channel allocation to common channel configuration.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
12				SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected.
13				SS changes SYSTEM INFORMATION BLOCK TYPE 12 message to request that cell 2 be included in neighbour cell list for inter-frequency measurements.
14				SS increases the transmission power of cell 2 by 20 dBm, and then wait for a [x] seconds to allow the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall detect that cell 2 has become the best cell and then perform cell re-selection procedure.
16		←	CELL UPDATE CONFIRM	SS acknowledges the cell 2 is updated.

Notes:

The value [x] seconds is TBD, after the cell re-selection duration is determined from TS 25.304.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE Internal measurement system information	Not Present

PAGING TYPE 1

Information Element	Value/Remarks
Paging Record List	
- Paging Record	CN Originator
- CHOICE Paging originator	Terminating PS Data Call
- Paging cause	CS Domain
- CN domain identity	IMSI (DS-41)
- CHOICE UE Identity	Set to the same value as in USIM card
- IMSI (DS-41)	Not Present
BCCH modification info	

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Transition to CELL_DCH"

RRC CONNECTION SETUP COMPLETE

Information Element	Value/Remarks
Hyperframe Number	Not checked.
UE Radio access capability	
- Conformance test compliance	Checked to see if set to 'R99'
- PDCP capability	Not checked.
- RLC capability	Not checked.
- Transport channel capability	Not checked.
- RF capability	Not checked.
- Physical channel capability	Not checked.
- UE multi-mode/multi-RAT capability	Not checked.
- Security capability	Not checked.
- LCS capability	Not checked.
- Measurement capability	
- FDD measurements DL	Checked to see if set to 'TRUE'
- TDD measurements DL	Not checked.
- GSM measurements DL	Not checked.
- GSM 900 DL	Not checked.
- DCS 1800 DL	Not checked.
- GSM 1900 DL	Not checked.
- Multi-carrier measurement DL	Not checked.
- FDD measurements UL	Checked to see if set to 'TRUE'
- TDD measurements UL	Not checked.
- GSM measurements UL	Not checked.
- GSM 900 UL	Not checked.
- DCS 1800 UL	Not checked.
- GSM 1900 UL	Not checked.
- Multi-carrier measurement UL	Not checked.
UE system specific capability	Not checked.

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	1
- Downlink DPCH Offset Value	Active
- DPCH compressed mode info	
- TGPSI	FDD Measurement
- TGPS Status Flag	62
- Transmission gap pattern sequence configuration parameters	(Current CFN + (256 – TTI/10msec)) mod 256
- TGMP	8
- TGPRC	10
- TGCFN	5
- TGSN	15
- TGL1	35
- TGL2	35
- TGD	Mode 1
- TGPL1	DL
- TGPL2	F/2
- RPP	F/2
- ITPRM	No code change
- UL/DL Mode	A
- Downlink compressed mode method	2.0
- Uplink compressed mode method	1.0
- Scrambling code change	
- Downlink frame type	
- DeltaSIR	
- DeltaSIRAfter	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/Remark
Measurement Identity Number	15
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 2
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 15
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 2
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 2
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in RRC CONNECTION SETUP message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the same message sub-type found in Clause 8.1 of TS34.108.

8.4.1.6.5 Test Requirement

After step 4 the UE shall transmit RRC CONNECTION SETUP COMPLETE message with the IE "Measurement capability", indicating that both uplink and downlink inter-frequency measurements for FDD mode are supported.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 2's CPICH Ec/No value.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages which contain inter-frequency measured results for cell 2's CPICH Ec/No value.

After step 14 the UE shall transmit CELL UPDATE message to inform that a cell reselection to cell 2 has occurred.

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

When transiting from CELL_FACH state to CELL_DCH state, the UE shall resume intra-frequency measurement if it has previously stored such a measurement context in CELL_DCH state. If the measurement context indicates reporting in CELL_DCH state, the UE shall re-start the associated reporting activities. In the case when the UE is not assigned any measurement tasks, it shall monitor the list of neighbouring cells stated in system information messages. It shall transmit MEASUREMENT REPORT messages when the reporting criteria (if specified in system information messages) are met. When in CELL_DCH state, the UE shall override existing measurement and reporting contexts extracted from system information messages, if a MEASUREMENT CONTROL message is received. The UE shall then apply the new measurement and reporting parameters accordingly.

Reference

3GPP TS 25.331, clause 8.4.1.8

8.4.1.7.3 Test Purpose

To confirm that UE resumes intra-frequency measurement and reporting when it enters CELL_DCH state from CELL_FACH state, if such a condition exists before entering CELL_DCH state. To confirm that the UE continues to monitor the neighbour cells intra-frequency measurement list found in system information messages, if no previous assigned measurement is present. To confirm that the UE transmits MEASUREMENT REPORT messages if reporting conditions stated in system information messages have been satisfied. To confirm that a subsequent MEASUREMENT CONTROL message received in CELL_DCH state

8.4.1.7.4 Method of test

Initial Condition

System Simulator: 3 cells –All 3 are all active. The transmission power (RSCP) for CPICH of the 3 cells are as follow: cell 1 (-40dBm), cell 2 (-55dBm) and cell 3 (-70dBm).

UE: CELL_FACH in cell 1.

Test Procedure

The UE is brought to CELL_FACH state, after the test operator has successfully initiated a packet-switched data call. The SYSTEM INFORMATION BLOCK TYPE 12 message is changed with respect to the default message contents, specifying that cell 2 is to be included in the neighbouring cell list for intra-frequency measurement. Event 1e is selected in IE "Intra-frequency measurement reporting criteria".

SS send a PHYSICAL CHANNEL RECONFIGURATION message to UE, allocating dedicated physical channels on both uplink and downlink direction. Upon receiving such a message, the UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and move to CELL_DCH state. The UE shall send MEASUREMENT REPORT messages to indicate that the measured result of cell 2, as the measurement quantity has exceeded the threshold value in system information message. After receiving this message, SS transmits MEASUREMENT CONTROL message in which it specifies that intra-frequency measurement for cell 3 shall be performed. The reporting criteria are the same as in SYSTEM INFORMATION BLOCK TYPE 12 message, except that the reporting threshold is lowered. After receiving such a message, the UE shall transmit another MEASUREMENT REPORT message. SS verifies that only measurement reading for cell 3 is included and no IEs shall be present, pertaining to measurement quantity in cell 2.

Next, SS sends PHYSICAL CHANNEL RECONFIGURATION message to UE. In this message, the physical channel resources are switched to common physical channels – PRACH (RACH) for the uplink and S-CCPCH (FACH) for the downlink. UE shall reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE and transits to CELL_FACH. SS checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received. SS then transmits another MEASUREMENT CONTROL message. The key parameters employed are: measurement type = 'intra-frequency measurement', measurement object = 'cell 2', reporting criteria = 'periodic reporting', measurement validity = 'resume', UE state for reporting = 'CELL_DCH'. SS waits for 10 seconds before sending a PHYSICAL CHANNEL RECONFIGURATION message, comprising DPDCH physical channels. UE shall then return to CELL_DCH state, start to monitor the neighbour cell specified by the SS while the UE was in CELL_FACH state. The UE shall resume periodic reporting of cell 2's CPICH RSCP measured results by sending MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_FACH after having successfully connected a packet-switched data call. SYSTEM INFORMATION TYPE BLOCK TYPE 12 message is changed according to the descriptions in Specific Message Contents.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates DPDCH physical channels.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
4	→	←	MEASUREMENT REPORT	Reports cell 2's RSCP value.
5	←	→	MEASUREMENT CONTROL	Specifies cell 3 as the measurement object for intra-frequency measurement. The reporting criteria is the same as defined in SYSTEM INFORMATION BLOCK TYPE 12 message, with the exception that threshold for event 1e is lowered.
6	→	←	MEASUREMENT REPORT	UE shall report the estimated value for cell 3's CPICH RSCP reading only.
7	←	→	PHYSICAL CHANNEL RECONFIGURATION	Allocates PRACH and S-CCPCH physical channels.
8	→	←	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9				SS checks that no MEASUREMENT REPORT messages are sent by UE.
10	←	→	MEASUREMENT CONTROL	SS indicates that intra-frequency measurement and reporting for cell 2 be resumed if the UE subsequently transits to CELL_DCH state.
11	←	→	PHYSICAL CHANNEL RECONFIGURATION	SS waits for 10 seconds before sending this message. DPCH physical channels are assigned to the UE in this message.
12	→	←	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
13	→	←	MEASUREMENT REPORT	UE begins to report cell 2's measured results again.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	10
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- W	Not present
- Hysteresis	1.0 dB
- Threshold used frequency	-60dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present
- Reporting Threshold	-60dBm
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting Interval	16 seconds
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH in PS"

MEASUREMENT REPORT (Step 4)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 10
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5)

Information Element	Value/Remark
Measurement Identity Number	11
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	1.0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Reporting Threshold	-90dBm
- Time to Trigger	0
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 11
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 3
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_FACH from CELL_DCH in PS"

MEASUREMENT CONTROL (Step 10)

Information Element	Value/Remark
Measurement Identity Number	12
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Resume
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 2
- W	Not Present
- Hysteresis	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Reporting Threshold	-65dBm
- Time to Trigger	0
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting cell status	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 11)

Same as in step 2

MEASUREMENT REPORT (Step 13)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 12
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

8.4.1.7.5 Test Requirement

After step 3 the UE shall report cell 2's CPICH RSCP value by transmitting a MEASUREMENT REPORT message.

After step 5 the UE shall delete all measurement and reporting contexts obtained from system information messages. However, it shall transmit a MEASUREMENT REPORT message containing measured results of cell 3's CPICH RSCP value only.

After step 8 the UE shall stop intra-frequency measurement reporting assigned previously in the MEASUREMENT CONTROL message received in step 5.

After step 12 the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT message, containing measured results of cell 2's CPICH RSCP value.

8.4.1.8 Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.8.1 Definition

8.4.1.8.2 Conformance requirement

When transitioning from CELL_FACH state to CELL_DCH state, the UE shall stop monitoring the list of inter-frequency neighbour cells indicated in system information messages. If the UE has a previously stored inter-frequency measurement context marked as resume, it shall reinstate the suspended measurement and associated reporting activities after it has entered CELL_DCH state.

Reference

3GPP TS 25.331 clause 8.4.1.8

8.4.1.8.3 Test Purpose

To confirm that the UE erases all inter-frequency measurement contexts used in CELL_FACH state, when it moves to CELL_DCH. To confirm that the UE resumes inter-frequency measurements and reporting, which was assigned prior to CELL_FACH state, after it moves to CELL_DCH state.

8.4.1.8.4 Method of test

Initial Condition

SS: 3 cells – All 3 cells are active and the applicable radio conditions are stated in the table below:

	Cell 1	Cell 2	Cell 3
UARFCN (N_u and N_d)	Channel 1	Channel 2	Channel 2
CPICH RSCP	-60 dBm	-65 dBm	-75 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm	-90 dBm

S	30	25	15

UE: CELL_FACH in cell 1 after an incoming packet-switched data call is successfully established.

Test Procedure

The UE is in CELL_FACH state after a successful connection, triggered by an incoming packet-switched data call. SS modifies the content of SYSTEM INFORMATION BLOCK TYPE 12 message, which indicates that cell 2 shall be included in the list of neighbouring cells to be monitored for inter-frequency measurements. Next, SS transmits MEASUREMENT CONTROL message to request the UE to execute an inter-frequency measurement for cell 3. The parameters of the reporting criteria are as follow: event-triggered with event identity = '2c', threshold for non-used frequency = '-80 dBm', hysteresis = '1.0dB', time to trigger = '10 seconds', amount of reporting = '1' and reporting interval = '0'. In the same message, IE"Measurement validity" is set to resume and "UE state for reporting" is assigned the value 'CELL_DCH'. SS sends PHYSICAL CHANNEL RECONFIGURATION message to allocate dedicated physical channels to the UE. Simultaneously, SS uses this message to command UE to start applying compressed mode mechanism for DPCH. The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then move to CELL_DCH state. SS waits for 10 seconds. The UE shall transmit MEASUREMENT REPORT message, containing the selected frequency quality estimate (in the case CPICH Ec/No) of cell 3. SS verifies that this message does not contain measured results for cell 2. After sending this message, the UE shall not transmit any more MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_FACH state after establishing an incoming packet-switched data call. SS modifies SYSTEM INFORMATION BLOCK TYPE 12 to include cell 2 into the neighbour cell list for inter-frequency measurements.
2		←	MEASUREMENT CONTROL	SS specifies inter-frequency measurement and reporting parameters for cell 3.
3		←	PHYSICAL CHANNEL RECONFIGURATION	SS allocates DPCH physical channels and specifies compressed mode parameters
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_DCH state.
5		→	MEASUREMENT REPORT	UE shall resume inter-frequency measurement task for cell 3 and transmit this message to report the measured CPICH Ec/No value

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12 (Step 1)

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency measurement identity number	15
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -90dBm
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	Not Present
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0dB
- Time to trigger	10 sec
- Amount of reporting	1
- Reporting interval	0
- Parameters required for each non used frequency	
- Threshold non-used frequency	-80dBm
- W non-used frequency	0.0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

MEASUREMENT CONTROL (Step 2)

Information Element	Value/Remark
Measurement Identity Number	14
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 3
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 3
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	
- Resume/Release	Resume
- UE State	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	0
- Time to trigger	10 seconds
- Amount of reporting	1
- Reporting Interval	0
- Reporting cell status	Not Present
- Parameters required for each non-used frequency	
- Threshold non used frequency	-80 dBm
- W non-used frequency	0.0

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	1
- Downlink DPCH Offset Value	Active
- DPCH compressed mode info	
- TGPSI	FDD Measurement
- TGPS Status Flag	62
- Transmission gap pattern sequence configuration parameters	(Current CFN + (256 – TTI/10msec)) mod 256
- TGMP	8
- TGPRC	10
- TGCFN	5
- TGSN	15
- TGL1	35
- TGL2	35
- TGD	Mode 1
- TGPL1	DL
- TGPL2	F/2
- RPP	F/2
- ITPRM	No code change
- UL/DL Mode	A
- Downlink compressed mode method	2.0
- Uplink compressed mode method	1.0
- Scrambling code change	
- Downlink frame type	
- DeltaSIR	
- DeltaSIRAfter	

MEASUREMENT REPORT (Step 5)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 14
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 3
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 3
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 3
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Event Results	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 3
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 3
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.8.5 Test Requirement

After step 4 the UE shall transmit a MEASUREMENT REPORT message, containing the measured results for cell 3's CPICH Ec/No value. The UE shall not transmit any messages pertaining to cell 2's measurements.

8.4.1.9 Measurement Control and Report: Unsupported measurement in the UE

8.4.1.9.1 Definition

8.4.1.9.2 Conformance requirement

If the UTRAN indicates the UE to perform a measurement that is not supported in the UE, the UE shall keep the measurement configuration. Then the UE shall transmit a MEASUREMENT CONTROL FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS25.331 clause 8.4.1.

8.4.1.9.3 Test purpose

To confirm that the UE transmits a MEASUREMENT CONTROL FAILURE message, with the value "unsupported measurement" specified in IE "failure cause" when the SS commanded the UE to perform an unsupported measurement by sending a MEASUREMENT CONTROL message.

8.4.1.9.4 Method of test

Initial Condition

System Simulator : 1cell
UE : CELL_DCH

[Editor's note : It is assumed in this test that the UE under test does not possess any inter-system measurement capability. The mandatory type(s) of measurement capability that should be implemented by the UE is to be discussed]

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a MEASUREMENT CONTROL message which includes parameters (e.g. Measurement identity number : 2 , measurement command : Setup , measurement type: inter-system measurements, measurement reporting mode: unacknowledged and periodical reporting, measurement object: inter-system cell information, measurement quantity: Signal strength, reporting quantity: RSSI on BCCH carrier). As the UE under test does not support inter-system measurement, it shall transmit a MEASUREMENT CONTROL FAILURE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state.
2		←	MEASUREMENT CONTROL	Including the parameters (e.g. Measurement identity number : 2 , measurement command : Setup , measurement type: inter-system measurements, measurement reporting mode: unacknowledged and periodical reporting, measurement object: inter-system cell information, measurement quantity: Signal strength, reporting quantity: RSSI on BCCH carrier).
3		→	MEASUREMENT CONTROL FAILURE	Which is set to "unsupported measurement" in IE "failure cause".

Specific Message Content

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	2
Measurement Command	Setup
Measurement Reporting Mode	Unacknowledged mode
Additional measurements list	Not Present
CHOICE measurement type	Inter-system measurement
- Inter-system cell info list	
- Removed inter-system cells	Not Present
- New inter-system cells	1
- Inter-system cell id	
- CHOICE <i>Radio Access Technology</i>	GSM
- Qoffset _{s,n}	Not Present
- HCS Neighbouring Cell Information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -90dBm
- Maximum allowed UL TX power	Set to the maximum allowed by UE RF power class
- BSIC	Set to the BSIC code of cell 2
- BSIC ARFCN	Set to the ARFCN assigned to cell 2
- Output power	Not Present
- Inter-system measurement quantity	
- CHOICE <i>reporting criteria</i>	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-system reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting Cell Status	Not Present
- CHOICE Report Criteria	
- Amount of reporting	Periodical reporting criteria
- Reporting Interval	Infinity
	32 seconds

MEASUREMENT CONTROL FAILURE

Information Element	Value/Remarks
Failure cause	To check if it is set to "Unsupported measurement"

8.4.1.9.4 Test requirement

After step 2 the UE shall identify the unsupported measurement element in the MEASUREMENT CONTROL message and transmit a MEASUREMENT CONTROL FAILURE. In this message, the value "unsupported measurement" shall be specified in IE "failure cause".

8.4.1.10 Measurement Control and Report: Failure (Invalid Message Reception)

8.4.1.10.1 Definition

8.4.1.10.2 Conformance requirement

When the UE received a MEASUREMENT CONTROL message containing an unexpected conditional IE, it shall reply with a MEASUREMENT CONTROL FAILURE message stating the appropriate protocol error information. It shall maintain the monitoring and measurement reporting mechanism as in before the MEASUREMENT CONTROL message has been received.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.10.3 Test Purpose

To confirm that the UE does not change its current monitoring and measurement settings after it has received an illegal MEASUREMENT CONTROL message, which contains an unexpected IE error. To

confirm that the UE resume its normal measurement reporting operations after transmitting MEASUREMENT CONTROL FAILURE message to the SS.

8.4.1.10.4 Method of test

Initial Condition

System Simulator : 1 cell.

UE : CELL_DCH

Test Procedure

The UE is initially brought to CELL_DCH. SS transmits a MEASUREMENT CONTROL message to the UE, commanding it to start transmitting report messages for the reporting quantity "UE Transmitted Power". SS then waits for the MEASUREMENT REPORT message with the allocated measurement identity to arrive. Then it transmits the MEASUREMENT CONTROL message again. In this message, SS requests that the reporting activities for "UE Transmitted Power" be stopped. At the end of this message, SS appends an unknown information element. When the UE receives this message, it shall reply with MEASUREMENT CONTROL FAILURE message as it has detected a protocol error. It shall not cease to report its own transmission power level using MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
2		←	MEASUREMENT CONTROL	SS transmits this message on downlink DCCH to instruct UE to start reporting the quantity "UE transmit power".
3		→	MEASUREMENT REPORT	UE shall send this message periodically at 32 seconds interval
4		←	MEASUREMENT CONTROL	SS sends a MEASUREMENT CONTROL message to request that UE stop the reporting activity.
5		→	MEASUREMENT CONTROL FAILURE	UE shall maintain its current measurement context and send this message.
6		→	MEASUREMENT REPORT	32 seconds after step 3, UE shall continue to transmit this message to the SS.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE Transmitted Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds

MEASUREMENT REPORT (Step 3)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 3
Measurement Results	
CHOICE measurement	Check to see if set to "UE internal measurement"
- UE Transmitted Power	Check to see if the reported power is compatible with RF class
- UE Rx-Tx report entries	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 4)

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Stop
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Contains an arbitrary value

MEASUREMENT CONTROL FAILURE (Step 5)

Information Element	Value/Remark
Failure cause	Check to see if set to "protocol error"
Protocol error information	Check to see if set to "Message extension not comprehended"

MEASUREMENT REPORT (Step 6)

Same as in the requirement for step 3

8.4.1.10.5 Test Requirement

After step 4 the UE shall transmit MEASUREMENT FAILURE message, stating the IE "failure cause" as "protocol error" and IE "protocol error information" as "message extension not comprehended". It shall continue to send MEASUREMENT REPORT with the correct identity number and measurement result entries at approximately 32 seconds interval.

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00154**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 002

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Updates to "RLC Size" IE

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

In CR-412r1 for TS 25.331 V3.2.0, a more efficient way of specifying the RLC size in each transport format was proposed. Previously, there was a distinction between bit mode and octet mode representation of the RLC size. Instead, a common "RLC Size" IE is used now, with size ranging from 0 to 4092 bits. This CR presents the affected parts in relation to the modifications for TS 25.331

Clauses affected:

8.3.1.5, 8.3.1.6, 8.3.1.7, 8.3.1.8, 8.3.1.14, Annex A

Other specs affected:

Other 3G core specifications ☐
Other GSM core specifications ☐
MS test specifications ☒
BSS test specifications ☐
O&M specifications ☐

→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

CR-XXX to 34.108

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1.5 Cell Update: UL data transmission in URA_PCH

8.3.1.5.1 Definition

8.3.1.5.2 Conformance requirement

This procedure is to update UTRAN with the current cell information if the UE wants to transmit UL data while in URA_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.5.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits UL data if the UE is in URA_PCH state. To confirm that the UE sends the correct response to CELL UPDATE CONFIRM message, after it has taken into consideration the current TFS and/or TFCS settings.

8.3.1.5.4 Method of test

Initial Condition

System Simulator: 1cell

UE: URA_PCH

Test Procedure

The UE starts from URA_PCH state, after the operator initiates an outgoing packet data transmission. The UE then moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "UL data transmission". After receiving such a message, SS transmits CELL UPDATE CONFIRM message without specifying any of the following IEs: "new C-RNTI", "new U-RNTI", "PRACH Info" and "Secondary CCPCH Info". The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS waits until uplink data transmission is completed and sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. Since the IE "DRX Indicator" is set to "DRX with URA updating" in the downlink message, the UE shall move to URA_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message and specifies the cause to be "UL data transmission". SS replies with the default CELL UPDATE CONFIRM message defined in TS 34.108. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS again waits for the transmission of user packet data to complete and then sends RNTI REALLOCATION message on the downlink DCCH. The IE "DRX Indicator" is set to "DRX with URA updating". The UE shall move to URA_PCH state and acknowledges that it starts using the new RNTI identity provided. Finally, SS prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message once more. After the SS receives this message, it replies with a CELL UPDATE CONFIRM message including the IEs "PRACH info", "Secondary CCPCH info". The IE "DRX Indicator" is set to "No DRX" in this message. The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink PRACH specified in the CELL UPDATE CONFIRM message. Then the UE shall enter CELL_FACH state and proceed to transmit packet data.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to URA_PCH state. SS prompts the test operator to begin a packet data transmission.
2		→	CELL UPDATE	The UE shall move to CELL FACH state with the message set to "UL data transmission" in IE "Cell update cause" .
3		←	CELL UPDATE CONFIRM	Use default message content.
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
5				SS waits until transmission of uplink data has been completed.
6		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with URA update"
7		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
8				SS modifies <u>MASTER INFORMATION BLOCK</u> , <u>SYSTEM INFORMATION BLOCK TYPE 5</u> and <u>6</u> messages. SS prompts test operator to initiate a packet data transmission.
9		→	CELL UPDATE	Should be same as in step 2
10		←	CELL UPDATE CONFIRM	Use default message content.
11		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
12				SS waits until transmission of uplink data has been completed.
13		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with URA update"
14		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
15				SS prompts test operator to initiate a packet data transmission.
16		→	CELL UPDATE	Should be same as in step 2
17		←	CELL UPDATE CONFIRM	Including the IEs" PRACH info", " Secondary CCPCH"
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	SS verifies that this message is received from PRACH physical channel using the configurations set in IE"PRACH Info" in CELL UPDATE CONFIRM message.

Specific Message Contents

CELL UPDATE (Step 2, 9 and 16)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'UL Data Transmission' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3 and 10)

Use the same message sub-type found in ~~Clause 8.1 of TS34.108~~ Annex A.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Annex A ~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH) - Available Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub-Channel number - Sub-Channel number Downlink DPCH info for one radio link - Primary CPICH Info - Primary Scrambling Code - PDSCH with SHO DCH Info - PDSCH code mapping - Secondary CCPCH Info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH Info - Secondary scrambling code - Channelization code - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing Offset	 0 Refer to the parameter set for TS 34.108 0 Refer to the parameter set for TS 34.108 0 Set to the scrambling code for cell 1's P-CPICH. Not Present. Not Present. Not Present TRUE Not Present. Use default (Scrambling code of P-CPICH) 1 Not Present. Use default (Scrambling code of P-CPICH) FALSE 256 255 TRUE TRUE Flexible 0 chips

RNTI REALLOCATION (Step 6)

Use the same message sub-type found in Annex A ~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 0000 1111' DRX with URA updating

RNTI REALLOCATION (Step 13)

Use the same message sub-type found in Annex A ~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 1111 1111' DRX with URA updating

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 4 and 18)

Only the message type IE in this message will be checked.

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 12)

Only the message type IE in this message will be checked.

MASTER INFORMATION BLOCK (Step 8)

Use the same message sub-type found in Clause 6.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 8)

Use the same message sub-type found in Clause 6.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information	
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
~~- CHOICE Mode~~	~~FDD~~
~~- Octet mode RLC size info type 2~~	
~~- CHOICE Transport block size~~	~~Size type 1~~
~~- RLC Size type 1~~	~~296 bits~~
- Semi-static Transport Format	
- Transmission time interval	80 msec
- Type of channel coding	No coding
- Coding Rate	No Present
- Rate matching attribute	1
- CRC Size	16 bits

8.3.1.5.5 Test requirement

After step 1 the UE shall move to CELL_FACH state to initiate a cell update procedure and transmits a CELL UPDATE message which is set to "UL data transmission" in IE "Cell update cause".

After step 3 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE "Cell update cause" shall be set to "UL data transmission".

After step 10 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE "Cell update cause" shall be set to "UL data transmission".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH resources assigned in CELL UPDATE CONFIRM, which is sent in step 17.

8.3.1.6 Cell Update: UL data transmission in CELL_PCH

8.3.1.6.1 Definition

8.3.1.6.2 Conformance requirement

This procedure is to update UTRAN with the current cell of the UE if the UE wants to transmit UL data when the UE is in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.6.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits UL data if the UE is in CELL_PCH state. To confirm that the UE sends the correct response to CELL UPDATE CONFIRM message, after it has taken into consideration the current TFS and/or TFCS settings.

8.3.1.6.4 Method of test

Initial Condition

System Simulator: 1cell

UE: CELL_PCH

Test Procedure

The UE is in the CELL_PCH state. SS asks the test operator to send some packet data. The UE moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, which shall indicate "UL data transmission" in IE" Cell update cause". After receiving such a message, SS transmits default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS waits until uplink data transmission is completed and sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. Since the IE"DRX Indicator" is set to "DRX with cell updating" in the downlink message, the UE shall move to CELL_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message and specifies the cause to be "UL data transmission". SS replies with a CELL UPDATE CONFIRM message which assigns a new C-RNTI to the UE. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS again waits for the transmission of user packet data to complete and then sends RNTI REALLOCATION message on the downlink DCCH. The IE"DRX Indicator" is set to "DRX with cell updating". The UE shall move to CELL_PCH state and acknowledges that it starts using the new RNTI identity provided. Finally, SS prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message once more. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs" PRACH info" and set IE"DRX Indicator" to "No DRX". Then the UE shall enter to the CELL_FACH state after sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS prompts the test operator to initiate a packet data call.
2		→	CELL UPDATE	The UE moves to CELL FACH state and transmit this message which is set to "UL data transmission" in IE" Cell update cause".
3		←	CELL UPDATE CONFIRM	Use default message content.
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
5				SS waits until transmission of uplink data has been completed.
6		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with cell update"
7		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
8				SS modifies <u>MASTER INFORMATION BLOCK</u> , <u>SYSTEM INFORMATION BLOCK TYPE 5</u> and <u>6</u> messages. SS prompts test operator to initiate a packet data transmission.
9		→	CELL UPDATE	Should be same as in step 2
10		←	CELL UPDATE CONFIRM	Use default message content.
11		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
12				SS waits until transmission of uplink data has been completed.
13		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with cell update"
14		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
15				SS prompts test operator to initiate a packet data transmission.
16		→	CELL UPDATE	Should be same as in step 2
17		←	CELL UPDATE CONFIRM	Including the IE" PRACH info" and set IE"DRX Indicator" to "No DRX".
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	SS verifies that this message is received from PRACH physical channel using the configurations set in IE"PRACH Info" in CELL UPDATE CONFIRM message.

Specific Message Contents

CELL UPDATE (Step 2, 9 and 16)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'UL Data Transmission' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3 and 10)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH) - Available Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub-Channel number - Sub-Channel number Downlink DPCH info for one radio link - Primary CPICH Info - Primary Scrambling Code - PDSCH with SHO DCH Info - PDSCH code mapping - Secondary CCPCH Info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH Info - Secondary scrambling code - Channelization code - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing Offset	0 Refer to the parameter set for TS 34.108 0 Refer to the parameter set for TS 34.108 0 Set to the scrambling code for cell 1's P-CPICH. Not Present. Not Present. Not Present TRUE Not Present. Use default (Scrambling code of P-CPICH) 1 Not Present. Use default (Scrambling code of P-CPICH) FALSE 256 255 TRUE TRUE Flexible 0 chips

RNTI REALLOCATION (Step 6)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 0000 1111' DRX with cell updating

RNTI REALLOCATION (Step 13)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 1111 1111' DRX with cell updating

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 4 and 18)

Only the message type IE in this message will be checked.

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 12)

Only the message type IE in this message will be checked.

MASTER INFORMATION BLOCK (Step 8)

Use the same message sub-type found in Clause 6.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 8)

Use the same message sub-type found in Clause 6.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information - RACH TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks ~~- CHOICE Mode~~ ~~- Octet mode RLC size info type 2~~ ~~- CHOICE Transport block size~~ ~~- RLC Size type 1~~ - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC Size	Common transport channels 1 ~~FDD~~ Size type 1 296 bits 80 msec No coding No Present 1 16 bits

8.3.1.6.5 Test requirement

After step 1 the UE shall move to CELL_FACH state, initiate a cell update procedure for the UL data transmission, and transmit a CELL UPDATE message which is set to "UL data transmission" in IE" Cell update cause".

After step 3 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 10 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH resources assigned in CELL UPDATE CONFIRM, which is sent in step 17.

8.3.1.7 Cell Update: paging response in URA_PCH

8.3.1.7.1 Definition

8.3.1.7.2 Conformance requirement

This procedure is to update UTRAN with the current cell of the UE after it receives a PAGING TYPE 1 message addressed to itself while it is in URA_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.7.3 Test purpose

To confirm that the UE executes a cell update procedure when it receives a PAGING TYPE1 message while operating in URA_PCH state. To confirm that the UE responds with an appropriate uplink message after receiving a CELL UPDATE CONFIRM message during cell updating procedure triggered by paging.

8.3.1.7.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH

Test Procedure

The UE is brought to URA_PCH state. SS transmits a PAGING TYPE 1 message to page for the UE, setting IE" paging originator" to "UTRAN Originator". The UE shall move to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH. This message shall set IE" Cell update cause" to "Paging Response". After the SS receives this message, it transmits the default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS then sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. In this message, the IE"DRX Indicator" is set to "DRX with URA updating". As a result, the UE shall move to URA_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS pages the UE again using the U-RNTI identity. The UE shall send CELL UPDATE message and specify the cause to be "Paging Response". SS replies with the default CELL UPDATE CONFIRM message again. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS sends another RNTI REALLOCATION message on the downlink DCCH, with the IE"DRX Indicator" set to "DRX with URA updating". The UE shall move to URA_PCH state and acknowledges that it starts using the new C-RNTI identity provided by transmitting RNTI REALLOCATION COMPLETE message. SS pages the UE again using PAGING TYPE 1 message. The UE shall send CELL UPDATE message once more. SS transmits a CELL UPDATE CONFIRM message which includes the IEs"new C-RNTI", "new U-RNTI" on the downlink DCCH. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. In the next sequence, SS transmits RNTI REALLOCATION message and assigns a new C-RNTI identity to the UE. The UE shall reply with RNTI REALLOCATION COMPLETE message and move to URA_PCH state. SS then pages the UE once more using PAGING TYPE 1 message. The UE shall initial the cell update procedure by dispatching a CELL UPDATE message on the uplink CCCH. SS replies with a CELL UPDATE CONFIRM message which includes information of the PRACH channel to be used. The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE, sent on the DCCH supported by the PRACH indicated in CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is first brought to URA_PCH state.
2		←	PAGING TYPE 1	SS transmits a PAGING TYPE1 message to the UE which includes the UE's assigned U-RNTI with the IE" paging originator" set to "UTRAN originator".
3		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "paging response".
4		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
6				SS modifies <u>MASTER INFORMATION BLOCK</u> , <u>SYSTEM INFORMATION BLOCK</u> TYPE 5 and 6 message. The TFS of the PRACH is changed.
7		←	RNTI REALLOCATION	Allocates a new U-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
8		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
9		←	PAGING TYPE 1	SS pages the UE again
10		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
11		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
12		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
13		←	RNTI REALLOCATION	Allocates a new U-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
14		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
15		←	PAGING TYPE 1	SS pages the UE again
16		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
17		←	CELL UPDATE CONFIRM	IE "new C-RNTI" is included in this message
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
19		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
20		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
21		←	PAGING TYPE 1	UE paged using U-RNTI identity.
22		→	CELL UPDATE	IE"Cell Update Cause" shall be set to "Paging Response"
23		←	CELL UPDATE CONFIRM	IE "PRACH Info" is included.
24		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	This message shall be sent on the PRACH resource allocated in step 23.

Specific Message Contents

PAGING TYPE 1 (Step 2, 9, 15 and 21)

Information Element	Value/remark
CHOICE Paging Originator - U-RNTI - SRNC Identity - S-RNTI	UTRAN Originator '0000 0000 0001' '0000 0000 0000 0000 0001'

CELL UPDATE (Step 3, 10, 16 and 22)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Paging Response' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 4 and 11)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~.

PHYSICAL CHANNEL RECONFIGURATION (Step 5, 18 and 24)

Only the message type for this message is checked.

MASTER INFORMATION BLOCK (Step 6)

Use the same message sub-type found in Clause 6.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 6)

Use the same message sub-type found in ~~Clause 8.1 of TS34.108~~, with the following exceptions:

Use the same message sub-type found in ~~Clause 8.1~~ Clause 6.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information - RACH TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks ~~CHOICE Mode~~ ~~Octet mode RLC size info type 2~~ ~~CHOICE Transport block size~~ ~~RLC Size type 1~~ - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC Size	 Common transport channels 1 ~~FDD~~ Size type 1 296 bits 80 msec No coding No Present 1 16 bits

RNTI REALLOCATION (Step 7, 13 and 19)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	Selects any arbitrary unused 16-bits string DRX with URA updating

TRANSPORT CHANNEL RECONFIGURATION (Step 12)

Only the message type for this message is checked.

CELL UPDATE CONFIRM (Step 17)

Information Element	Value/remark
New C-RNTI	Selects any arbitrary unused 16-bits string

CELL UPDATE CONFIRM (Step 23)

Use the same message sub-type found in Annex A ~~Clause 8.1 of TS 34.108~~, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	1
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	1
- Sub-Channel number	
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

8.3.1.7.5 Test requirement

After step 2 the UE shall answer to the paging message then moves to CELL_FACH state and transmit a CELL UPDATE message. This message shall set the value "paging response" into IE" Cell update cause".

After step 4 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters CELL_FACH state.

After step 9 the UE shall respond the paging by replying with a CELL UPDATE message. IE"Cell Update Cause" shall be set to "Paging Response" in this message.

After step 11 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall answer the PAGING TYPE 1 message by sending a CELL UPDATE message. The IE"Cell Update Cause" shall have a value equals to "Paging Response".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 21 the UE shall respond to the PAGING TYPE 1 message addressed to itself and initiate a cell update procedure. It shall transmit CELL UPDATE message with the IE"Cell Update Cause" set to "Paging Response" in this message.

After step 23 the UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH channel indicated in CELL UPDATE CONFIRM message sent in step 23.

8.3.1.8 Cell Update: paging response in CELL_PCH

8.3.1.8.1 Definition

8.3.1.8.2 Conformance requirement

This procedure is to update UTRAN with the current cell when the UE receives a PAGING TYPE 1 message addressed to it while in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.8.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE receives a PAGING TYPE1 message while in CELL_PCH state. To confirm that the UE sends an appropriate uplink message after receiving a CELL UPDATE CONFIRM message during cell updating procedure due to paging.

8.3.1.8.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is in the CELL_PCH state. The SS transmits a PAGING TYPE 1 message to the UE on the downlink PCCH which includes the connected mode identity of the UE and set value "UTRAN originator" into IE" paging originator". The UE shall respond to this message. Then the UE shall move to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH which and set the value "Paging Response" into IE" Cell update cause". After the SS receives this message, it transmits the default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS then sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. In this message, the IE"DRX Indicator" is set to "DRX with cell updating". As a result, the UE shall move to CELL_PCH state. SS pages the UE again using the U-RNTI identity. The UE shall send CELL UPDATE message and specify the cause to be "Paging Response". SS replies with a CELL UPDATE CONFIRM message which comprises a new C-RNTI identity for the UE. After receiving this message, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then sends another RNTI REALLOCATION message on the downlink DCCH, with the IE"DRX Indicator" set to "DRX with cell updating". The UE shall move to CELL_PCH state and acknowledges that it starts using the new C-RNTI identity provided by transmitting RNTI REALLOCATION COMPLETE message. SS pages the UE again using PAGING TYPE 1 message. The UE shall send CELL UPDATE message once more. SS replies with a CELL UPDATE CONFIRM message which includes the IE"new C-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters the CELL_FACH state. In the final sequence, SS transmits RNTI REALLOCATION message and assigns a new C-RNTI identity to the UE. The UE shall reply with RNTI REALLOCATION COMPLETE message and move to CELL_PCH state. SS then pages the UE once more using PAGING TYPE 1 message. The UE shall initial the cell update procedure by dispatching a CELL UPDATE message on the uplink CCCH. SS replies with a CELL UPDATE CONFIRM message which includes the IE"PRACH Info". The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE, sent on the DCCH supported by the PRACH indicated in CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_PCH state.
2		←	PAGING TYPE 1	The SS transmits a PAGING TYPE1 message addressing the UE with its connected mode identity and set IE" paging originator" to "UTRAN originator".
3		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "paging response".
4		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
6				SS modifies the contents of <u>MASTER INFORMATION BLOCK</u> , SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages.
7		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with cell updating"
8		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state
9		←	PAGING TYPE 1	SS pages the UE again
10		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response"
11		←	CELL UPDATE CONFIRM	Contains the IE"new C-RNTI"
12		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmit this message.
13		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with cell updating".
14		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
15		←	PAGING TYPE 1	SS pages the UE again
16		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
17		←	CELL UPDATE CONFIRM	Including IE "PRACH Info" in this message.
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	To be sent on the new PRACH channel.

Specific Message Contents

Clause PAGING TYPE 1

Information Element	Value/remark
CHOICE Paging Originator - U-RNTI - SRNC Identity - S-RNTI	UTRAN Originator '0000 0000 0001' '0000 0000 0000 0000 0001'

CELL UPDATE (Step 3, 10 and 16)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Paging Response'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~.

PHYSICAL CHANNEL RECONFIGURATION (Step 5 and 18)

Only the message type for this message is checked.

MASTER INFORMATION BLOCK (Step 8)

Use the same message sub-type found in Clause 6.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
MIB Tag	<u>2</u>

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 6)

Use the same message sub-type found in ~~Clause 8.1~~ Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information	
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
~~CHOICE Mode~~	~~FDD~~
~~Octet mode RLC size info type 2~~	
~~CHOICE Transport block size~~	~~Size type 1~~
~~RLC Size type 1~~	~~296 bits~~
- Semi-static Transport Format	
- Transmission time interval	80 msec
- Type of channel coding	No coding
- Coding Rate	No Present
- Rate matching attribute	1
- CRC Size	16 bits

RNTI REALLOCATION (Step 7 and 13)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
New C-RNTI	Selects any arbitrary unused 16-bits string
DRX Indicator	DRX with cell updating

TRANSPORT CHANNEL RECONFIGURATION (Step 12)

Only the message type for this message is checked.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Annex A~~Clause 8.1 of TS34.108~~, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	2
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	2
- Sub-Channel number	
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

8.3.1.8.5 Test requirement

After step 2 the UE shall answer to the paging message, moves to CELL_FACH state, and then transmits a CELL UPDATE message setting "paging response" into IE" Cell update cause".

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and then enter CELL_FACH state.

After step 9 the UE shall respond to the paging again by sending CELL UPDATE message, with the IE"Cell update cause" set to "Paging response".

After step 11 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to end the cell updating procedure.

After step 15 the UE shall answers the paging message by sending a CELL UPDATE message, with the IE"Cell update cause" set to "Paging response".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH carried by the PRACH indicated in the CELL UPDATE message sent in step 17.

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these case. When the UTRAN receives this message, it is able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause "RB Control" when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active, with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and been allocated dedicated physical resources. Next SS send RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the UE sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel be released. However, this message does not contain information about the target cell to select when transiting to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to "RB Control" on the CCCH carried by PRACH physical channel, specified in cell 2's system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE"PRACH Info" and "Secondary CCPCH Info". To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on CCCH of cell 2. IE"Cell update cause" should be set to "RB Control". IE"DRX Indicator" set to "No DRX".
6		←	CELL UPDATE CONFIRM	IE"PRACH Info" and IE"Secondary CCPCH Info" are included in this message.
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in [Annex A Clause 8.1 of TS34.108](#), with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information for setup - RAB Info - RAB Identity - CN Domain Identity - RB Info to setup list - RB Info to setup - RB Identity - PDCP Info - RLC Info - RB Mapping Info	4 PS 4 Not Present. Use the same RLC configuration as in TS 34.108. Use the same RLC multiplexing scheme as in TS 34.108. Not Present.
RB to be affected list UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS addition information - CHOICE CTFC Size - CTFC Information - x bit CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present – use default value, all TFCs are allowed. FDD Normal Addition Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel
Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE RLC mode - Octet mode RLC size info type 1 - CHOICE Octet mode RLC size - RLC Size part 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 Dedicated transport channels 1 ~~Octet Mode RLC size info type 1~~ Size type 1 ~~16128 bits~~ Use the same settings as in TS 34.108
DL Transport Channel information common to all transport channels Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present. 2 Same as the TFS used in the uplink specified in this message.
Frequency info Maximum allow UL TX power	Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class.
CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present. Not Present. Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A ~~Clause 8.1 of TS 34.108~~, with the following exceptions:

Information Element	Value/remark

RAB information to release list	4
- RB Identity	
RB information to be affected list	DCCH for RRC (UM)
- RB information to be affected	0
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	1
- Logical channel identity	1
- RB information to be affected	DCCH for RRC (AM)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
- RB information to be affected	DCCH for NAS_DT-AM High Priority
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
- RB information to be affected	DCCH for NAS_DT-AM Low Priority
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
UL Transport Channel information common to all transport channels	
- TFC Subset	Not Present – use default value, all TFCs are allowed.
- CHOICE Mode	FDD
- UL DCH TFCS	Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2.
Deleted TrCH information list (uplink)	Not Present.
Added or Reconfigured TrCH information list	
- Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2.
DL Transport Channel information common to all transport channels	
- SCCPCH TFCS	Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2.
- DL DCH TFCS	Not Present.
Deleted TrCH information list (downlink)	
Added or Reconfigured TrCH information list	Not Present.
- Added or Reconfigured DL TrCH information	

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'RB Control'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Annex A ~~Clause 8.1 of TS34.108~~.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE "Cell Update Cause" shall be set to "RB Control".

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel broadcasted on the system information message in cell 2.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- TFCI combining indicator	Not Present
- Secondary CCPCH info	TRUE
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TFCI existence	FALSE
- Fixed or Flexible Position	TRUE
- Timing offset	Flexible
- TFCS	0
- Normal	(This IE is repeated for TFC number for PCH and FACH.)
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	

- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- FACH/PCH information	
- TFS	(PCH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
~~Octet mode RLC size info~~	
~~RLC size~~ Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	(FACH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
~~Octet mode RLC size info~~	
~~Transport block size~~ RLC size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- References to system information blocks	Not Present
- Scheduling information	
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

[illegible]

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	Not Present

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m} - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	Not Present

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~<u>RLC size</u> - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~<u>RLC size</u> - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block size~~ <u>RLC size</u>	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block size~~ <u>RLC size</u>	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block size~~ <u>RLC size</u>	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block size~~ <u>RLC size</u>	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- ~~Bit mode~~ RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode~~ RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info	Not Present Not Present

- ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks	
- ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.)
Added or Reconfigured DL TrCH information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	0 0 0dB
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	0.00 Not Present
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.)
Added or Reconfigured DL TrCH information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0 0 0dB 2
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> <u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> <u>Reference to TS34.108 clause 6.10 Parameter Set</u>
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode-RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	(This IE is repeated for TFC number.)
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC information - CTFC	0
- Gain factor information - Gain factor β_c - Gain factor β_d	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	3
- Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode-RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode-RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode-RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(TM DTCH)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info - DPCCH power offset	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB

- PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 100 Not Present Not Present Primary CPICH may be used Not Present

- DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(DTCH TM)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	(DTCH TM)
RB information to be affected	5
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	3
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	3
- Transport channel identity	1
- Logical channel identity	
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

- MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present 1 DCH 4 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present (This IE is repeated for TFC number.)
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB

Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Primary CPICH may be used Not Present
- Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information	Not Present

- Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~ <u>RLC size</u> - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Bit mode~~ RLC size info	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Transport block size~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Bit mode~~ RLC size info	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Transport block size~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	

-DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set - TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set - Not Present 0 (single) - Reference to TS34.108 clause 6.10 Parameter Set - Flexible - TRUE - Not Present 0 1 - inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code	- No code change - A 2.0 1.0 - None - Not Present - Not Present - Not Present 100 - Not Present - Not Present - Primary CPICH may be used - Not Present

- channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4 (AM DTCH) 4 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 2 1 Not Present 1 DCH 2 1 Not Present
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) Information(Reconfiguration/Addition information) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) Information(Reconfiguration/Addition information) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> <u>Reference to TS34.108 clause 6.10 Parameter Set</u> Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> <u>Reference to TS34.108 clause 6.10 Parameter Set</u> Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Deleted DL TrCH information	
- Transport channel identity	3
Deleted DL TrCH information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode~~ RLC size info	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Transport block size~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode~~ RLC size info	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Transport block size	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCCCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TECS	Not Present

- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 5
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7 Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 6
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) 8 Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 PCH 2 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Transport block size~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Transport block size~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	0
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~ <u>RLC size</u> - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~ <u>RLC size</u> - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present
	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity	FACH
- PDCP info	1
- RLC info	5
- Downlink RLC mode	(TM BCCH for RRC)
- In-sequence delivery	7
- RB mapping info	Not Present
- Information for each multiplexing option	TRUE
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	TRUE
- Downlink RLC mode	1
- In-sequence delivery	PCH
- RB mapping info	2
- Information for each multiplexing option	1
- Number of RLC logical channels	Not Present
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to be affected	
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Transport block size~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- ~~Transport block size~~	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	150
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	0
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~<u>RLC size</u> - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~<u>RLC size</u> - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present
	Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode-RLC size-info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Transport block size	1
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	33dBm
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
Downlink information common for all radio links	8slot
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256

- TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
Configuration)	
- Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode-RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	inactive FDD Measurement 62 $(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$ 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier	Not Present
- Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TECS	Not Present

- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH Information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent Not Present

- Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info	1
Transport block size	(This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Not Present
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	33dBm
Downlink information common for all radio links	-6dB
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1	8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256
	8
	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
Deleted UL TrCH Information - Transport channel identity	1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Deleted DL TrCH Information	4
- Transport channel identity	1
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Not Present
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	33dBm
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

[illegible]

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH Information - Transport channel identity	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - ~~Bit mode~~ RLC size info - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- CPOCH set ID - DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity - DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m - Deleted DL TrCH Information - Transport channel identity - Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode~~ RLC size info - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode~~ RLC size info - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Transport block size	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	3 (AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 5
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 (TM CCCH for RRC)
RB information to be affected	5
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 1
RB information to be affected	(UM CCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 (TM BCCH for RRC)
RB information to be affected	7
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6 (TM PCCH for RRC)
RB information to be affected	8
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 PCH
RB information to be affected	2
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS - Normal - TFCS Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 4 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature - Signature - Signature - Signature	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm 0 1 2

- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present

- DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block sizeRLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block sizeRLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to

- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (single)
- Downlink DPCH power control information	Reference to TS34.108 clause 6.10 Parameter Set
- DPC mode	Flexible
- Spreading factor	TRUE
- Fixed or Flexible Position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	inactive
- TGPSI	FDD Measurement
- TGPS Status Flg	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	
- Uplink compressed mode method	

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info	No code change A 2.0 1.0 None Not Present Not Present Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 Not Present 1 DCH 4 1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	3
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- ~~Bit mode~~ RLC size info - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode~~ RLC size info - ~~Transport block size~~	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set (This IE is needed for 12.2 kbps and 10.2 kbps) 4 (This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode~~ RLC size info - ~~Transport block size~~	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	0.00
- Transparent mode signalling info	Not Present

Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present (This IE is needed for 12.2 kbps and 10.2 kbps) 4 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set <u>Reference to TS34.108 clause 6.10 Parameter Set</u> ~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00 Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor βc	
- Gain factor βd	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block sizeRLC size~~	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block sizeRLC size~~	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0
Deleted DL TrCH information	0
Added or Reconfigured DL TrCH information	0dB
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	1
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode RLC size info~~ - ~~Transport block size~~	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
Downlink information common for all radio links	8slot
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor βc	
- Gain factor βd	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block sizeRLC size~~	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
~~Octet mode RLC size info~~	
~~Transport block sizeRLC size~~	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type	
Integrity check info	Not checked.
Uplink integrity protection activation info	Not checked.
Radio bearer uplink ciphering activation time info	Value should not be present unless otherwise stated.
	Not checked.
RB with PDCP information list	
- RB with PDCP information	

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity	5
- CHOICE RLC info type	
- RLC info	(TM RLC)
- Downlink RLC mode	TRUE
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
Signalling RB information to setup	(UM CCCH for RRC)
- RB identity	6
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
Signalling RB information to setup	(TM BCCH for RRC)
- RB identity	7
- CHOICE RLC info type	
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
Signalling RB information to setup	(TM PCCH for RRC)
- RB identity	8
- CHOICE RLC info type	
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~ Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm 0 1 2 3 4 5 6 7 Reference to TS34.108 clause 6.10 Parameter Set 0 Reference to TS34.108 clause 6.10 Parameter Set

- Available Sub Channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present
- Primary CPICH info	
- Primary scrambling code	
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	
- DL Scrambling Code	
- Signalling Method	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	

- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00 Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks	Not Present
- ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks	
- ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	0dB
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH -spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	Not Present
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE
	Not Present
	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks ~~Octet mode RLC size info~~ ~~Transport block sizeRLC size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	Not Present
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.)
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set ~~Reference to TS34.108 clause 6.10 Parameter Set~~ ~~Reference to TS34.108 clause 6.10 Parameter Set~~
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Bit mode-RLC size info~~ - ~~Transport block size~~ - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier	100 Not Present

- TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
	0
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
	0
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- ~~Bit mode RLC size info~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- ~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	150 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - ~~Octet mode RLC size info~~ - ~~Transport block size~~RLC size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00155**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 003

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Inclusion of "Hyper frame number" and START list into uplink messages

Work item:

Category:
(only one category shall be marked with an X)

F	Correction	☐
A	Corresponds to a correction in an earlier release	☐
B	Addition of feature	☐
C	Functional modification of feature	☒
D	Editorial modification	☐

Release:

Phase 2	☐
Release 96	☐
Release 97	☐
Release 98	☐
Release 99	☒
Release 00	☐

Reason for change:

In order to allow the UE to reset the HFN in the case of HFN inconsistency, the HFN reset mechanism was proposed in CR-293r1, CR-408r1 for TS 25.331 V3.2.0. As a result, "Hyper frame number" IE had been inserted into uplink CELL UPDATE, RRC CONNECTION RE-ESTABLISHMENT REQUEST and RRC CONNECTION RE-ESTABLISHMENT COMPLETE messages. This CR provides the relevant modifications to both default and specific message contents of the affected clauses.

In CR-310r5 for TS 25.331 V3.2.0, it was recommended RRC CONNECTION SETUP COMPLETE messages shall contain the START values for all CN domains accessible by the UE. This CR reflects this revision.

Clauses affected: 8.3.1.X, 8.3.3.1, 8.3.3.2, 8.4.1.3, 8.4.1.4, 8.4.1.5, 8.4.1.6, Annex A

Other specs affected:

Other 3G core specifications	☐	→ List of CRs:	CR-XXX to 34.108
Other GSM core specifications	☐	→ List of CRs:	
MS test specifications	☒	→ List of CRs:	
BSS test specifications	☐	→ List of CRs:	
O&M specifications	☐	→ List of CRs:	

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1.1 Cell Update: cell reselection in CELL_FACH

8.3.1.1.1 Definition

8.3.1.1.2 Conformance requirement

This procedure is used to update UTRAN with the current cell of the UE after it has performed a cell reselection in CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.1.3 Test purpose

To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active, Cell 2 is inactive

UE: CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state, camping onto cell 1. The SS starts to broadcast BCCH on the primary CPICH in cell 2 with a power level greater than that in cell 1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "DRX Indicator" set to "DRX with Cell updating", to the UE on the downlink DCCH. SS verifies that the UE does not send any response to this message. UE shall move to CELL_PCH state. SS then reverses the transmission power of cell 1 and cell 2. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with CELL UPDATE CONFIRM message and allocates new C-RNTI and U-RNTI identities to the UE. The IE "DRX Indicator" is set to "No DRX" in this message. The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. Following this, SS reverses the transmission power settings for cell 1 and cell 2 again. The UE shall initiate a cell update procedure by transmitting a CELL UPDATE message and stating the cause as 'cell re-selection'. SS replies with a CELL UPDATE CONFIRM message which contains IE "PRACH Info" and IE "Secondary CCPCH Info". The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge the assignment of the new physical resources.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2		←	BCCH	The SS starts to broadcast BCCH on the primary CPICH in cell 2 with a power level that is higher than that in cell 1. The UE shall find that the cell 2 is better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
3		→	CELL UPDATE	Value "cell reselection" should be indicated in IE" Cell update cause"
4		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "DRX with cell updating"
5				SS checks the uplink PRACH channel to verify that no response is sent by UE. SS reverses the transmission power level of cell 1 and cell 2.
6		→	CELL UPDATE	UE shall revert to normal service in cell 1 and set the cause to "cell reselection".
7		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "No DRX". New C-RNTI and U-RNTI identities are assigned to the UE.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_FACH state and sends this message.
9				SS reverses the transmission power level of cell 1 and cell 2.
10		→	CELL UPDATE	UE shall detect that cell 2 has become stronger.
11		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "No DRX". At the same time, IE"PRACH Info" and IE"Secondary CCPCH Info" are also indicated.
12		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_FACH state and sends this message on the new PRACH assigned in step 11.

Specific Message Contents

CELL UPDATE (Steps 3 and 6)

Use the same message sub-type found in Clause 8.1 of TS34.108.

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if it is present Check to see if set to 'Cell Re-selection' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
DRX Indicator	DRX with cell updating

CELL UPDATE CONFIRM (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI	'0000 0000 0000 0001' An arbitrary 20-bits string which is different from original S-RNTI An arbitrary 16-bits string which is different from original C-RNTI.

CELL UPDATE (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0000 0001' Check to see if set to same string in IE"S-RNTI" in IE"New U-RNTI" of CELL UPDATE CONFIRM message in step 7. Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if it is present Check to see if set to 'Cell Re-selection' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 11)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	0 and 1
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	
- Sub-Channel number	0 and 1
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

8.3.1.1.5 Test requirement

After step 2 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE" Cell update cause".

After step 4 the UE shall not transmit any uplink message in response to the CELL UPDATE CONFIRMATION message received in step 4.

After step 5 the UE shall sent CELL UPDATE message to cell 2, in order to indicate that a cell reselection has taken place.

After step 7 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that it has started to use the new RNTI identities allocated.

After step 9 the UE shall sent CELL UPDATE message to cell 1, in order to indicate that a cell reselection has taken place.

After step 11 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new PRACH physical channel assigned previously in CELL UPDATE CONFIRM message sent in step 11.

8.3.1.2 Cell Update: cell reselection in CELL_PCH8.3.1.2.1

Definition

8.3.1.2.2 Conformance requirement

This procedure is to update UTRAN with information of the current cell, after a cell reselection has occurred in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.2.3 Test purpose

To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the successful reselection of another UTRA cell. To confirm that the UE replies with an appropriate uplink message after receiving CELL UPDATE CONFIRM message during the cell update procedure.

8.3.1.2.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active, Cell 2 is inactive

UE: CELL_PCH in cell 1

Test Procedure

The UE is brought to CELL_PCH state and is camped onto cell 1. The SS starts to broadcast system information on the BCCH on the primary CPICH in cell 2. The transmission level of cell 2 is raised to be higher than in cell 1. When the UE detects the presence of cell 2, it moves to CELL_FACH state and transmits a CELL UPDATE message on the uplink CCCH. The value "cell reselection" shall be set in IE "Cell update cause" in CELL UPDATE message. Upon reception of CELL_UPDATE message, the SS transmits a CELL UPDATE CONFIRM message which includes the IEs "PRACH info", "Secondary CCPCH info" to the UE on the downlink DCCH. In this message, the IE "DRX Indicator" is set to "No DRX". Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters CELL_FACH state. SS exchanges the transmission power of cell 1 and cell 2, so that cell 1 becomes the stronger cell. UE shall initiate a cell update procedure again by transmitting CELL UPDATE message. SS replies with a CELL UPDATE CONFIRM message with the IE "DRX Indicator" set to "DRX with cell updating". After receiving this message, the UE returns to CELL_PCH state without transmitting any uplink message. Finally, SS reverses the transmission strengths of cell 1 and cell 2 again. This will cause the UE to send CELL UPDATE message on the uplink PRACH of cell 2. SS then sends CELL UPDATE CONFIRM message with the assignment of new C-RNTI and U-RNTI identities. The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message as a response.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_PCH state in cell 1
2		←	BCCH	The SS starts to broadcast system information message on BCCH on the primary CPICH from cell 2. The transmission level of cell 2 is set to be higher than that in cell 1. The UE shall find that the cell 2 is better and attempt to perform a cell reselection.
3		→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "cell reselection"
4		←	CELL UPDATE CONFIRM	The message includes IEs" PRACH info", "Secondary CCPCH info" and set IE"DRX Indicator" to "No DRX".
5		→	PHYSICAL CHANNEL RECONFIGURATION CONFIRM	UE stays in CELL_FACH state.
6				SS swaps the transmission power of cell 1 and cell 2, making cell 1 the stronger cell.
7		→	CELL UPDATE	
8		←	CELL UPDATE CONFIRM	IE"DRX Indicator" is set to "DRX with cell updating".
9				UE moves to CELL_PCH state. SS exchanges the transmission power of cell 1 and cell 2.
10		→	CELL UPDATE	UE shall re-select to cell 2 and transmit this message.
11		←	CELL UPDATE CONFIRM	Includes IE"new U-RNTI" and IE"new C-RNTI"
12		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

CELL UPDATE (Steps 3, 7 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if it is present
<u>Hyper frame number</u>	Check to see if it is absent or set to 'FALSE'
Cell Update Cause	Check to see if it is absent
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 4)

Use the same message found in step 11 of Clause 8.1.3.1.1.3

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
DRX Indicator	DRX with cell updating

CELL UPDATE CONFIRM (Step 11)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI	'0000 0000 0000 0001' An arbitrary 20-bits string which is different from original S-RNTI
New C-RNTI	An arbitrary 16-bits string which is different from original C-RNTI.

8.3.1.2.5 Test requirement

After step 2 the UE shall reselect to cell 2 and transmit a CELL UPDATE message, containing the IE" Cell update cause" set to "cell reselection".

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 9 the UE shall detect that cell 2 has become the stronger cell. It shall send a CELL UPDATE message on cell 2' PRACH channel with the cause set to "cell reselection".

After step 11 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

8.3.1.3 Cell Update: periodical cell update in CELL_FACH

8.3.1.3.1 Definition

8.3.1.3.2 Conformance requirement

This procedure is to update UTRAN with the current cell information, after the UE has remained in the service area in the CELL_FACH state for a period exceeding the timer value T305.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.3.3 Test purpose

To confirm that the UE executes a periodic cell update procedure following the expiry of timer T305. To confirm that the UE sends a correct response to the CELL UPDATE CONFIRM message. To confirm that the UE listens to the system information messages and then responds to a change in the setting for timer T305.

8.3.1.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH

Test Procedure

The UE is in CELL_FACH state. When the UE detects the expiry of timer T305 according to the settings in system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH with a cause indicating periodic cell updating. SS replies with a CELL UPDATE CONFIRM message, omitting the IEs "new C-RNTI", "new U-RNTI", "PRACH Info" and "Secondary CCPCH Info". The IE"DRX Indicator", however, is specified and set to "No DRX". SS verifies that the UE does not transmit any uplink message.

SS then waits for T305 to expire again. The UE shall send another CELL UPDATE message to report periodic cell updating. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI", "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS once again allows T305 timer to expire, the UE shall transmit CELL UPDATE message for the third time. The new U-RNTI shall be indicated in this message together with the correct updating cause. In this sequence, SS replies with a CELL UPDATE CONFIRM message containing new channel parameters in IEs "PRACH Info" and "Secondary CCPCH Info". The UE shall then send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message by using the newly allocated PRACH resources. Finally, the content of the SYSTEM INFORMATION BLOCK TYPE 2 is changed to disable periodic cell updating. SS then monitors the uplink DCCH for a period up to the maximum possible value for timer T305 (720minutes) and verifies that no CELL_UPDATE message is received. After this, the SS changes the timer T305 value to 5 minutes. UE shall resume periodic cell updating procedure and transmit CELL_UPDATE message 5 minutes after this modification.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS waits until T305 has expired.
2		→	CELL UPDATE	IE "Cell update cause" shall be set to "Periodic cell updating"
3		←	CELL UPDATE CONFIRM	No RNTI identities are given. No information on PRACH and S-CCPCH are provided.
4				SS verifies that no uplink message is received from UE. SS waits for another period to allow T305 to expire.
5		→	CELL UPDATE	Which is set to "periodic cell update" in IE" Cell update cause" for the expiry of timer T305.
6		←	CELL UPDATE CONFIRM	Including IEs" new C-RNTI" , "new U-RNTI" and IE"DRX Indicator" is set to "No DRX"
7		→	RNTI REALLOCATION COMPLETE	
8				SS waits for a duration to allow timer T305 in the UE to expire.
9		→	CELL UPDATE	
10		←	CELL UPDATE CONFIRM	IEs "PRACH Info" and "Secondary CCPCH Info" are included.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
12		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 2	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents). It waits for 720 minutes and checks that no CELL UPDATE message is transmitted on uplink PRACH channel.
13		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 2	SS modified the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents)

14	→	CELL UPDATE	UE shall transmit this message 5 minutes after step 13, with "cell update cause" set to "periodic cell updating"
15	←	CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 2 and 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if it is present Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE CONFIRM (Step 6 and 15)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI	Set to '0000 0000 0001' Set to an arbitrary string different from '0000 0000 0000 0000 0001'

CELL UPDATE (Step 9 and 14)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0000 0001' Check to see if set to same bit string as in IE"S-RNTI" in IE"U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6. Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if it is present Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH) - Available Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub-Channel number - Sub-Channel number Downlink DPCH info for one radio link - Primary CPICH Info - Primary Scrambling Code - PDSCH with SHO DCH Info - PDSCH code mapping - Secondary CCPCH Info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH Info - Secondary scrambling code - channelization code - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing Offset	0 and 1 Refer to the parameter set for TS 34.108 0 Refer to the parameter set for TS 34.108 0 and 1 Set to the scrambling code for cell 1's P-CPICH. Not Present. Not Present. Not Present TRUE Not Present. Use default (Scrambling code of P-CPICH) 1 Not Present. Use default (Scrambling code of P-CPICH) FALSE 256 255 TRUE TRUE Flexible 0 chips

MASTER INFORMATION BLOCK (Step 12)

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 2 (Step 12)

Information Element	Value/remark
UE Timers and constants in connected mode T305	No update

MASTER INFORMATION BLOCK (Step 13)

Information Element	Value/remark
MIB Tag	1

SYSTEM INFORMATION BLOCK TYPE 2 (Step 13)

Information Element	Value/remark
UE Timers and constants in connected mode T305	5 minutes

8.3.1.3.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 then transmits a CELL UPDATE message setting value "periodic cell update" into IE "Cell update cause".

After step 3 the UE shall not send any uplink message as a response to CELL UPDATE CONFIRM message sent in step 3.

After step 4 the UE shall send CELL UPDATE message, specifying the cell updating cause to be "periodic cell update".

After step 6 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall send CELL UPDATE message, specifying the cell updating cause to be "periodic cell update".

After step 10 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using the PRACH radio resources allocated.

Between step 12 and step 13 the UE shall cease periodic cell updating activity and not transmit any CELL UPDATE messages.

After step 13 the UE shall transmit a CELL UPDATE message stating the cell update cause to be periodic updating, 5 minutes after the SS has modified the BCCH data.

8.3.1.4 Cell Update: periodical cell update in CELL_PCH

8.3.1.4.1 Definition

8.3.1.4.2 Conformance requirement

This procedure is to update UTRAN with the information of the current cell when the UE detects that it is still in the service area, while residing in the CELL_PCH state, after the expiry of timer T305.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.4.3 Test purpose

To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the expiry of timer T305.
To confirm that the UE sends an appropriate response message after receiving the CELL UPDATE CONFIRM message.

8.3.1.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE starts from CELL_PCH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE moves to CELL_FACH state. It shall transmit a CELL UPDATE message on the uplink CCCH and set the value "periodic cell update" into IE "Cell update cause". SS answers with a CELL UPDATE CONFIRM message, with IE "DRX Indicator" set to "No DRX". IEs related to RNTI, PRACH and S-CCPCH are omitted from this message. SS checks to confirm that the UE does not send a response. SS sends a RNTI REALLOCATION message to the UE, stating the new C-RNTI identity to be used and also setting IE "DRX Indicator" to "DRX with cell updating". The UE shall reply with RNTI REALLOCATION COMPLETE message and transit to CELL_PCH state. Next, SS stays idle until timer T305 is once again expired. The UE shall transmit CELL UPDATE message in order to initiate cell updating procedure. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI" and "new U-RNTI". Then the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH and before entering CELL_PCH state. In the next sequence, SS assigns a new U-RNTI identity to the UE by transmitting RNTI REALLOCATION message again. Once again, the IE "DRX Indicator" is set to "DRX with cell updating". After reception of this message, the UE moves to CELL_PCH state and start to listen to the paging sub-channels derived based on the value of new U-RNTI given. Finally, SS waits until T305 has expired once more, the UE shall send CELL UPDATE message again on uplink CCCH. SS replies with CELL UPDATE CONFIRM which includes IEs "PRACH Info" and "Secondary CCPCH Info". The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using PRACH indicated in CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS waits until T305 has expired.
2		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "periodic cell update".
3		←	CELL UPDATE CONFIRM	Does not include IEs "PRACH Info", "Secondary CCPCH Info", "new C-RNTI" or "new U-RNTI".
4				SS verifies that no response message is received.
5		←	RNTI REALLOCATION	Allocates a new C-RNTI identity to UE and set IE"DRX Indicator" to " DRX with Cell updating".
6		→	RNTI REALLOCATION COMPLETE	UE shall move to CELL_PCH state
7				SS remains idle for a period sufficient for T305 timer to expire.
8		→	CELL UPDATE	This message shall contain the new U-RNTI identity assigned in step 5.
9		←	CELL UPDATE CONFIRM	New C-RNTI and U-RNTI identities are assigned.
10		→	RNTI REALLOCATION COMPLETE	
11		←	RNTI REALLOCATION	SS assigns a new U-RNTI identity to the UE. At the same time, it sets IE"DRX Indicator" to "DRX with cell updating".
12		→	RNTI REALLOCATION COMPLETE	UE shall move to CELL_PCH state after sending this message.
13				SS waits for T305 to expire.
14			CELL UPDATE	
15			CELL UPDATE CONFIRM	Allocates new common physical resources by specifying IEs"PRACH Info" and "Secondary CCPCH Info".
16			PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

CELL UPDATE (Step 2)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if it is present Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108.

RNTI REALLOCATION (Step 5 and step 11)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI DRX Indicator	Set to '0000 0000 0001' Set to '0000 0000 0000 0000 1111' Set to '0000 0000 0000 1111' DRX with cell updating

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 9)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI	Set to '0000 0000 0001' Set to '0000 0000 0000 0000 1010' Set to '0000 0000 0000 0101'

CELL UPDATE (Step 14)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 15)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	0 and 1
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	
- Sub-Channel number	0 and 1
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

8.3.1.4.5 Test requirement

After step 2 the UE shall detect the expiry of timer T305, it shall then move to CELL_FACH state and transmits a CELL UPDATE message with the IE" Cell update cause" set to "periodic cell update".

After step 5 the UE shall reply with RNTI REALLOCATION COMPLETE message. It shall subsequently move to CELL_PCH state.

After step 7 the UE shall initiate a cell updating procedure by the transmission of a CELL UPDATE message. In this message, it shall indicate the new U-RNTI value assigned in step 5 and also set IE"Cell Updating Cause" to "Periodic Cell Updating".

After step 11 the UE shall reply with RNTI REALLOCATION COMPLETE message. It shall subsequently move to CELL_PCH state.

After step 13 the UE shall send a CELL UPDATE message. After step 15 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new PRACH channel assigned by the received CELL UPDATE CONFIRM message in step 15.

8.3.1.5 Cell Update: UL data transmission in URA_PCH

8.3.1.5.1 Definition

8.3.1.5.2 Conformance requirement

This procedure is to update UTRAN with the current cell information if the UE wants to transmit UL data while in URA_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.5.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits UL data if the UE is in URA_PCH state. To confirm that the UE sends the correct response to CELL UPDATE CONFIRM message, after it has taken into consideration the current TFS and/or TFCS settings.

8.3.1.5.4 Method of test

Initial Condition

System Simulator: 1cell

UE: URA_PCH

Test Procedure

The UE starts from URA_PCH state, after the operator initiates an outgoing packet data transmission. The UE then moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "UL data transmission". After receiving such a message, SS transmits CELL UPDATE CONFIRM message without specifying any of the following IEs: "new C-RNTI", "new U-RNTI", "PRACH Info" and "Secondary CCPCH Info". The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS waits until uplink data transmission is completed and sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. Since the IE "DRX Indicator" is set to "DRX with URA updating" in the downlink message, the UE shall move to URA_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message and specifies the cause to be "UL data transmission". SS replies with the default CELL UPDATE CONFIRM message defined in TS 34.108. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS again waits for the transmission of user packet data to complete and then sends RNTI REALLOCATION message on the downlink DCCH. The IE "DRX Indicator" is set to "DRX with URA updating". The UE shall move to URA_PCH state and acknowledges that it starts using the new RNTI identity provided. Finally, SS prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message once more. After the SS receives this message, it replies with a CELL UPDATE CONFIRM message including the IEs "PRACH info", "Secondary CCPCH info". The IE "DRX Indicator" is set to "No DRX" in this message. The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink PRACH specified in the CELL UPDATE CONFIRM message. Then the UE shall enter CELL_FACH state and proceed to transmit packet data.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to URA_PCH state. SS prompts the test operator to begin a packet data transmission.
2		→	CELL UPDATE	The UE shall move to CELL FACH state with the message set to "UL data transmission" in IE" Cell update cause" .
3		←	CELL UPDATE CONFIRM	Use default message content.
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
5				SS waits until transmission of uplink data has been completed.
6		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with URA update"
7		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
8				SS modifies SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. SS prompts test operator to initiate a packet data transmission.
9		→	CELL UPDATE	Should be same as in step 2
10		←	CELL UPDATE CONFIRM	Use default message content.
11		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
12				SS waits until transmission of uplink data has been completed.
13		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with URA update"
14		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
15				SS prompts test operator to initiate a packet data transmission.
16		→	CELL UPDATE	Should be same as in step 2
17		←	CELL UPDATE CONFIRM	Including the IEs" PRACH info", " Secondary CCPCH"
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	SS verifies that this message is received from PRACH physical channel using the configurations set in IE"PRACH Info" in CELL UPDATE CONFIRM message.

Specific Message Contents

CELL UPDATE (Step 2, 9 and 16)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'UL Data Transmission' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH) - Available Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub-Channel number - Sub-Channel number Downlink DPCH info for one radio link - Primary CPICH Info - Primary Scrambling Code - PDSCH with SHO DCH Info - PDSCH code mapping - Secondary CCPCH Info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH Info - Secondary scrambling code - Channelization code - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing Offset	 0 Refer to the parameter set for TS 34.108 0 Refer to the parameter set for TS 34.108 0 Set to the scrambling code for cell 1's P-CPICH. Not Present. Not Present. Not Present TRUE Not Present. Use default (Scrambling code of P-CPICH) 1 Not Present. Use default (Scrambling code of P-CPICH) FALSE 256 255 TRUE TRUE Flexible 0 chips

RNTI REALLOCATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 0000 1111' DRX with URA updating

RNTI REALLOCATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 1111 1111' DRX with URA updating

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 4 and 18)

Only the message type IE in this message will be checked.

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 12)

Only the message type IE in this message will be checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 8)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information	
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- Octet mode RLC size info type 2	
- CHOICE Transport block size	Size type 1
- Size type 1	296
- Semi-static Transport Format	
- Transmission time interval	80 msec
- Type of channel coding	No coding
- Coding Rate	No Present
- Rate matching attribute	1
- CRC Size	16 bits

8.3.1.5.5 Test requirement

After step 1 the UE shall move to CELL_FACH state to initiate a cell update procedure and transmits a CELL UPDATE message which is set to "UL data transmission" in IE "Cell update cause".

After step 3 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE "Cell update cause" shall be set to "UL data transmission".

After step 10 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE "Cell update cause" shall be set to "UL data transmission".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH resources assigned in CELL UPDATE CONFIRM, which is sent in step 17.

8.3.1.6 Cell Update: UL data transmission in CELL_PCH

8.3.1.6.1 Definition

8.3.1.6.2 Conformance requirement

This procedure is to update UTRAN with the current cell of the UE if the UE wants to transmit UL data when the UE is in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.6.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits UL data if the UE is in CELL_PCH state. To confirm that the UE sends the correct response to CELL UPDATE CONFIRM message, after it has taken into consideration the current TFS and/or TFCS settings.

Initial Condition

System Simulator: 1cell

UE: CELL_PCH

Test Procedure

The UE is in the CELL_PCH state. SS asks the test operator to send some packet data. The UE moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, which shall indicate "UL data transmission" in IE "Cell update cause". After receiving such a message, SS transmits default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS waits until uplink data transmission is completed and sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. Since the IE "DRX Indicator" is set to "DRX with cell updating" in the downlink message, the UE shall move to CELL_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message and specifies the cause to be "UL data transmission". SS replies with a CELL UPDATE CONFIRM message which assigns a new C-RNTI to the UE. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS again waits for the transmission of user packet data to complete and then sends RNTI REALLOCATION message on the downlink DCCH. The IE "DRX Indicator" is set to "DRX with cell updating". The UE shall move to CELL_PCH state and acknowledges that it starts using the new RNTI identity provided. Finally, SS prompts the test operator to transmit packet data. The UE shall send CELL UPDATE message once more. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "PRACH info" and set IE "DRX Indicator" to "No DRX". Then the UE shall enter to the CELL_FACH state after sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS prompts the test operator to initiate a packet data call.
2		→	CELL UPDATE	The UE moves to CELL FACH state and transmit this message which is set to "UL data transmission" in IE" Cell update cause".
3		←	CELL UPDATE CONFIRM	Use default message content.
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
5				SS waits until transmission of uplink data has been completed.
6		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with cell update"
7		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
8				SS modifies SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. SS prompts test operator to initiate a packet data transmission.
9		→	CELL UPDATE	Should be same as in step 2
10		←	CELL UPDATE CONFIRM	Use default message content.
11		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
12				SS waits until transmission of uplink data has been completed.
13		←	RNTI REALLOCATION	IE "DRX Indicator" set to "DRX with cell update"
14		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
15				SS prompts test operator to initiate a packet data transmission.
16		→	CELL UPDATE	Should be same as in step 2
17		←	CELL UPDATE CONFIRM	Including the IE" PRACH info" and set IE"DRX Indicator" to "No DRX".
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	SS verifies that this message is received from PRACH physical channel using the configurations set in IE"PRACH Info" in CELL UPDATE CONFIRM message.

Specific Message Contents

CELL UPDATE (Step 2, 9 and 16)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'UL Data Transmission' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH) - Available Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub-Channel number - Sub-Channel number Downlink DPCH info for one radio link - Primary CPICH Info - Primary Scrambling Code - PDSCH with SHO DCH Info - PDSCH code mapping - Secondary CCPCH Info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH Info - Secondary scrambling code - Channelization code - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing Offset	0 Refer to the parameter set for TS 34.108 0 Refer to the parameter set for TS 34.108 0 Set to the scrambling code for cell 1's P-CPICH. Not Present. Not Present. Not Present TRUE Not Present. Use default (Scrambling code of P-CPICH) 1 Not Present. Use default (Scrambling code of P-CPICH) FALSE 256 255 TRUE TRUE Flexible 0 chips

RNTI REALLOCATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 0000 1111' DRX with cell updating

RNTI REALLOCATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	'0000 0000 1111 1111' DRX with cell updating

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 4 and 18)

Only the message type IE in this message will be checked.

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 12)

Only the message type IE in this message will be checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 8)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information	
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- Octet mode RLC size info type 2	
- CHOICE Transport block size	Size type 1
- Size type 1	296
- Semi-static Transport Format	
- Transmission time interval	80 msec
- Type of channel coding	No coding
- Coding Rate	No Present
- Rate matching attribute	1
- CRC Size	16 bits

8.3.1.6.5 Test requirement

After step 1 the UE shall move to CELL_FACH state, initiate a cell update procedure for the UL data transmission, and transmit a CELL UPDATE message which is set to "UL data transmission" in IE" Cell update cause".

After step 3 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 8 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 10 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall initiate cell update procedure and transmit CELL UPDATE message on the uplink CCCH. The IE"Cell update cause" shall be set to "UL data transmission".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH resources assigned in CELL UPDATE CONFIRM, which is sent in step 17.

8.3.1.7 Cell Update: paging response in URA_PCH

8.3.1.7.1 Definition

8.3.1.7.2 Conformance requirement

This procedure is to update UTRAN with the current cell of the UE after it receives a PAGING TYPE 1 message addressed to itself while it is in URA_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.7.3 Test purpose

To confirm that the UE executes a cell update procedure when it receives a PAGING TYPE1 message while operating in URA_PCH state. To confirm that the UE responds with an appropriate uplink message after receiving a CELL UPDATE CONFIRM message during cell updating procedure triggered by paging.

Initial Condition

System Simulator: 1 cell

UE: URA_PCH

Test Procedure

The UE is brought to URA_PCH state. SS transmits a PAGING TYPE 1 message to page for the UE, setting IE" paging originator" to "UTRAN Originator". The UE shall move to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH. This message shall set IE" Cell update cause" to "Paging Response". After the SS receives this message, it transmits the default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS then sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. In this message, the IE"DRX Indicator" is set to "DRX with URA updating". As a result, the UE shall move to URA_PCH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS pages the UE again using the U-RNTI identity. The UE shall send CELL UPDATE message and specify the cause to be "Paging Response". SS replies with the default CELL UPDATE CONFIRM message again. After receiving this message, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. SS sends another RNTI REALLOCATION message on the downlink DCCH, with the IE"DRX Indicator" set to "DRX with URA updating". The UE shall move to URA_PCH state and acknowledges that it starts using the new C-RNTI identity provided by transmitting RNTI REALLOCATION COMPLETE message. SS pages the UE again using PAGING TYPE 1 message. The UE shall send CELL UPDATE message once more. SS transmits a CELL UPDATE CONFIRM message which includes the IEs"new C-RNTI", "new U-RNTI" on the downlink DCCH. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. In the next sequence, SS transmits RNTI REALLOCATION message and assigns a new C-RNTI identity to the UE. The UE shall reply with RNTI REALLOCATION COMPLETE message and move to URA_PCH state. SS then pages the UE once more using PAGING TYPE 1 message. The UE shall initial the cell update procedure by dispatching a CELL UPDATE message on the uplink CCCH. SS replies with a CELL UPDATE CONFIRM message which includes information of the PRACH channel to be used. The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE, sent on the DCCH supported by the PRACH indicated in CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is first brought to URA_PCH state.
2		←	PAGING TYPE 1	SS transmits a PAGING TYPE1 message to the UE which includes the UE's assigned U-RNTI with the IE" paging originator" set to "UTRAN originator".
3		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "paging response".
4		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
6				SS modifies SYSTEM INFORMATION BLOCK TYPE 5 and 6 message. The TFS of the PRACH is changed.
7		←	RNTI REALLOCATION	Allocates a new U-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
8		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
9		←	PAGING TYPE 1	SS pages the UE again
10		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
11		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
12		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
13		←	RNTI REALLOCATION	Allocates a new U-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
14		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
15		←	PAGING TYPE 1	SS pages the UE again
16		→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
17		←	CELL UPDATE CONFIRM	IE "new C-RNTI" is included in this message
18		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
19		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with URA updating".
20		→	RNTI REALLOCATION COMPLETE	UE moves to URA_PCH state.
21		←	PAGING TYPE 1	UE paged using U-RNTI identity.
22		→	CELL UPDATE	IE"Cell Update Cause" shall be set to "Paging Response"
23		←	CELL UPDATE CONFIRM	IE "PRACH Info" is included.
24		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	This message shall be sent on the PRACH resource allocated in step 23.

Specific Message Contents

PAGING TYPE 1 (Step 2, 9, 15 and 21)

Information Element	Value/remark
CHOICE Paging Originator - U-RNTI - SRNC Identity - S-RNTI	UTRAN Originator '0000 0000 0001' '0000 0000 0000 0000 0001'

CELL UPDATE (Step 3, 10, 16 and 22)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Paging Response' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 4 and 11)

Use the same message sub-type found in Clause 8.1 of TS34.108.

PHYSICAL CHANNEL RECONFIGURATION (Step 5, 18 and 24)

Only the message type for this message is checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information - RACH TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE Mode - Octet mode RLC size info type 2 - CHOICE Transport block size - Size type 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC Size	 Common transport channels 1 FDD Size type 1 296 80 msec No coding No Present 1 16 bits

RNTI REALLOCATION (Step 7, 13 and 19)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	Selects any arbitrary unused 16-bits string DRX with URA updating

TRANSPORT CHANNEL RECONFIGURATION (Step 12)

Only the message type for this message is checked.

CELL UPDATE CONFIRM (Step 17)

Information Element	Value/remark
New C-RNTI	Selects any arbitrary unused 16-bits string

CELL UPDATE CONFIRM (Step 23)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH)	
- Available Signature	1
- Signature	Refer to the parameter set for TS 34.108
- Available SF	0
- Scrambling code number	Refer to the parameter set for TS 34.108
- Puncturing Limit	
- Available Sub-Channel number	
- Sub-Channel number	1
Downlink DPCH info for one radio link	
- Primary CPICH Info	
- Primary Scrambling Code	Set to the scrambling code for cell 1's P-CPICH.
- PDSCH with SHO DCH Info	Not Present.
- PDSCH code mapping	Not Present.
- Secondary CCPCH Info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	TRUE
- Secondary CPICH Info	
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- Channelization code	1
- Secondary scrambling code	Not Present. Use default (Scrambling code of P-CPICH)
- STTD indicator	FALSE
- Spreading factor	256
- Code number	255
- Pilot symbol existence	TRUE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing Offset	0 chips

8.3.1.7.5 Test requirement

After step 2 the UE shall answer to the paging message then moves to CELL_FACH state and transmit a CELL UPDATE message. This message shall set the value "paging response" into IE" Cell update cause".

After step 4 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters CELL_FACH state.

After step 9 the UE shall respond the paging by replying with a CELL UPDATE message. IE"Cell Update Cause" shall be set to "Paging Response" in this message.

After step 11 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 15 the UE shall answer the PAGING TYPE 1 message by sending a CELL UPDATE message. The IE"Cell Update Cause" shall have a value equals to "Paging Response".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 21 the UE shall respond to the PAGING TYPE 1 message addressed to itself and initiate a cell update procedure. It shall transmit CELL UPDATE message with the IE"Cell Update Cause" set to "Paging Response" in this message.

After step 23 the UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using the PRACH channel indicated in CELL UPDATE CONFIRM message sent in step 23.

8.3.1.8 Cell Update: paging response in CELL_PCH

8.3.1.8.1 Definition

8.3.1.8.2 Conformance requirement

This procedure is to update UTRAN with the current cell when the UE receives a PAGING TYPE 1 message addressed to it while in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.8.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE receives a PAGING TYPE1 message while in CELL_PCH state. To confirm that the UE sends an appropriate uplink message after receiving a CELL UPDATE CONFIRM message during cell updating procedure due to paging.

8.3.1.8.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is in the CELL_PCH state. The SS transmits a PAGING TYPE 1 message to the UE on the downlink PCCH which includes the connected mode identity of the UE and set value "UTRAN originator" into IE" paging originator". The UE shall respond to this message. Then the UE shall move to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH which and set the value "Paging Response" into IE" Cell update cause". After the SS receives this message, it transmits the default CELL UPDATE CONFIRM message. The UE shall stay in CELL_FACH state and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH. SS then sends a RNTI REALLOCATION message. The UE shall reply with RNTI REALLOCATION COMPLETE message. In this message, the IE"DRX Indicator" is set to "DRX with cell updating". As a result, the UE shall move to CELL_PCH state. SS pages the UE again using the U-RNTI identity. The UE shall send CELL UPDATE message and specify the cause to be "Paging Response". SS replies with a CELL UPDATE CONFIRM message which comprises a new C-RNTI identity for the UE. After receiving this message, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and remains in CELL_FACH state. Next SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages. See specific message contents for further details. SS then sends another RNTI REALLOCATION message on the downlink DCCH, with the IE"DRX Indicator" set to "DRX with cell updating". The UE shall move to CELL_PCH state and acknowledges that it starts using the new C-RNTI identity provided by transmitting RNTI REALLOCATION COMPLETE message. SS pages the UE again using PAGING TYPE 1 message. The UE shall send CELL UPDATE message once more. SS replies with a CELL UPDATE CONFIRM message which includes the IE"new C-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and enters the CELL_FACH state. In the final sequence, SS transmits RNTI REALLOCATION message and assigns a new C-RNTI identity to the UE. The UE shall reply with RNTI REALLOCATION COMPLETE message and move to CELL_PCH state. SS then pages the UE once more using PAGING TYPE 1 message. The UE shall initial the cell update procedure by dispatching a CELL UPDATE message on the uplink CCCH. SS replies with a CELL UPDATE CONFIRM message which includes the IE"PRACH Info". The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE, sent on the DCCH supported by the PRACH indicated in CELL UPDATE CONFIRM message.Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_PCH state.
2		←	PAGING TYPE 1	The SS transmits a PAGING TYPE1 message addressing the UE with its connected mode identity and set IE" paging originator" to "UTRAN originator".
3		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE" Cell update cause" set to "paging respose".
4		←	CELL UPDATE CONFIRM	Use the default message from TS 34.108 Clause 8.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmits this message.
6				SS modifies the contents of SYSTEM INFORMATION BLOCK TYPE 5 and 6 messages.
7		←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with cell updating"
8		→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state

9	←	PAGING TYPE 1	SS pages the UE again
10	→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response"
11	←	CELL UPDATE CONFIRM	Contains the IE"new C-RNTI"
12	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE shall move to CELL_FACH state and transmit this message.
13	←	RNTI REALLOCATION	Allocates a new C-RNTI and set IE"DRX Indicator" to "DRX with cell updating".
14	→	RNTI REALLOCATION COMPLETE	UE moves to CELL_PCH state.
15	←	PAGING TYPE 1	SS pages the UE again
16	→	CELL UPDATE	IE" Cell update cause" shall be set to "paging response".
17	←	CELL UPDATE CONFIRM	Including IE "PRACH Info" in this message.
18	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	To be sent on the new PRACH channel.

Specific Message Contents

Clause PAGING TYPE 1

Information Element	Value/remark
CHOICE Paging Originator - U-RNTI - SRNC Identity - S-RNTI	UTRAN Originator '0000 0000 0001' '0000 0000 0000 0000 0001'

CELL UPDATE (Step 3, 10 and 16)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Paging Response' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Clause 8.1 of TS34.108.

PHYSICAL CHANNEL RECONFIGURATION (Step 5 and 18)

Only the message type for this message is checked.

SYSTEM INFORMATION BLOCK TYPE 5 and TYPE 6 (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH system information - RACH TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE Mode - Octet mode RLC size info type 2 - CHOICE Transport block size - Size type 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC Size	Common transport channels 1 FDD Size type 1 296 80 msec No coding No Present 1 16 bits

RNTI REALLOCATION (Step 7 and 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
New C-RNTI DRX Indicator	Selects any arbitrary unused 16-bits string DRX with cell updating

TRANSPORT CHANNEL RECONFIGURATION (Step 12)

Only the message type for this message is checked.

CELL UPDATE CONFIRM (Step 17)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
PRACH Info (for RACH) - Available Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub-Channel number - Sub-Channel number Downlink DPCH info for one radio link - Primary CPICH Info - Primary Scrambling Code - PDSCH with SHO DCH Info - PDSCH code mapping - Secondary CCPCH Info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH Info - Secondary scrambling code - Channelization code - Secondary scrambling code - STTD indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing Offset	2 Refer to the parameter set for TS 34.108 0 Refer to the parameter set for TS 34.108 2 Set to the scrambling code for cell 1's P-CPICH. Not Present. Not Present. Not Present TRUE Not Present. Use default (Scrambling code of P-CPICH) 1 Not Present. Use default (Scrambling code of P-CPICH) FALSE 256 255 TRUE TRUE Flexible 0 chips

8.3.1.8.5 Test requirement

After step 2 the UE shall answer to the paging message, moves to CELL_FACH state, and then transmits a CELL UPDATE message setting "paging response" into IE" Cell update cause".

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH and then enter CELL_FACH state.

After step 9 the UE shall respond to the paging again by sending CELL UPDATE message, with the IE"Cell update cause" set to "Paging response".

After step 11 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to end the cell updating procedure.

After step 15 the UE shall answers the paging message by sending a CELL UPDATE message, with the IE"Cell update cause" set to "Paging response".

After step 17 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH carried by the PRACH indicated in the CELL UPDATE message sent in step 17.

8.3.1.9 Cell Update: re-entering of service area after T305 expiry and being out of service area

8.3.1.9.1 Definition

8.3.1.9.2 Conformance requirement

When a UE detects that it's out of service area after experiencing a T305 timer expiry, it shall try to search for a suitable cell to camp on. At the same time, it shall start timer T307. If the UE subsequently re-enters the service area of a cell before T307 expires, it shall perform a cell update procedure.Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.9.3 Test purpose

To confirm that the UE performs a cell search after experiencing an "out of service area" condition following the expiry of timer T305. To confirm that the UE initiates cell updating procedure if it manages to re-enter the service area.8.3.1.9.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active with the CPICH Ec/No set to –80dB and the $Q_{qualmin}$ value is at –90dBm. Cell 2 is inactive.

UE: CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state. SS decreases the transmission power of cell 1 until the cell selection parameter $S < 0$ (decrease transmission power of cell 1's CPICH by 15 dBm). Following the expiry of periodic cell updating timer T305 according to the system information, the UE shall detect that it is out of service area. Within the time interval equivalent to T307 timer value, the SS restores the transmission power of cell 1. The UE shall find that it is back in service area, and transmits a CELL UPDATE message to the SS on the uplink CCCH. In this message, the IE "Cell update cause" shall be set to "periodic cell update". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message with the IE "DRX Indicator" set "No DRX" on the downlink DCCH. The UE shall enter CELL_FACH state. Next, cell 1 is switched off. SS waits until T305 timer has expired and then turns on cell 2. The transmission level for cell 2 is such that the CPICH E_c/N_0 value is estimated at -70dB . Q_{qualmin} of cell 2 is identical to the value used previously by cell 1. The UE shall discover that cell 1 is no longer suitable for camping and initiate a cell search. It shall detect the presence of cell 2 and reselects to this cell. Following this, it shall transmit CELL UPDATE message with the cause set to "Cell Reselection". SS ends this test by sending a CELL UPDATE CONFIRM message. Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state of cell 1.
2				SS decreases the transmission power of cell 1 so that its S value falls below 0.
3				The UE shall detect a "out of service" condition upon expiry of timer T305 and it shall search for other cells to camp on.(T307 timer starts)
4				SS restores cell 1's original power level before T307 timer expires.
5		→	CELL UPDATE	The value "periodic cell update" should be found in IE" Cell update cause" in this message
6		←	CELL UPDATE CONFIRM	"DRX Indicator" is set to "No DRX"
7				SS switches off cell 1 and wait until T305 has expired.
8				SS turns on cell 2 and set the transmission strength of such that CPICH E_c/N_0 is at -70dB .
9			CELL UPDATE	UE shall detect the presence of cell 2 and re-select to it. It shall transmit this message with cause set to "Cell Reselection"
10			CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Periodic cell updating' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 6 and 10)

Use the same message sub-type found in Clause 8.1 of TS34.108.

CELL UPDATE (Step 9)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Cell Reselection' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

8.3.1.9.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message in which the IE" Cell update cause" is set to the value "periodic cell update".

After step 8 the UE shall reselect to cell 2 and then transmit a CELL UPDATE message, with the IE"Cell Update Cause" set to "Cell Reselection".

8.3.1.10 Cell Update: expiry of T307 after T305 expiry and being out of service area

8.3.1.10.1 Definition

8.3.1.10.2 Conformance requirement

This procedure is required to cater for the case of a failure to update UTRAN with the current cell, after the expiry of T307. In this case, the UE shall return to idle mode and perform cell reselection if possible.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.10.3 Test purpose

To confirm that the UE moves to idle mode after the expiry of T307, indicating that it is out of service area when attempting to perform a periodic cell updating procedure.

8.3.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is in CELL_PCH state at the start of the test. Before the expiry of periodic cell updating timer T305, SS starts to decrease the downlink transmission power such that the UE discovers that the cell is no longer suitable for camping and this results in a "out of service area" condition. The SS continues to listen to the uplink channel to detect possible attempts to perform a cell updating procedure. The UE shall not send CELL UPDATE message on the uplink DCCH, instead it triggers timer T307. After the expiry of timer T307 the UE enters idle state. This confirmed by the SS when it sends a PAGING TYPE 1 message to the UE using its U-RNTI identity, and the UE does not respond to the page. SS then attempts to page for the UE again, this time using PAGING TYPE 2 message sent on downlink DCCH. Likewise, the UE shall not respond to this page.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state.
2				SS starts to decrease the transmission power until the cell is no longer suitable for camping. The UE shall detect that it is out of service area and refrains from transmitting CELL UPDATE message due to periodic cell updating.
3				The UE detects the expiry of timer T305 and it searches for cell to camp.(T307 timer starts). After the expiry of timer T307 the UE The UE enters to the idle state.
4		←	PAGING TYPE 1	SS pages the UE at its assigned paging occasion using the allocated U-RNTI value. The UE shall not respond to this page as it has already entered the idle mode.
5		←	PAGING TYPE 2	SS pages the UE on the downlink DCCH. The UE shall not respond to this page.

Specific Message Contents

Paging Type 1 (Step 4)

Information Element	Value/remark
Page record list - Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI BCCH Modification info	UTRAN Originator Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not Present.

Paging Type 2 (Step 5)

Information Element	Value/remark
Integrity check info Paging cause CN domain identity Paging Record Type Identifier	Not Present Terminating PS Data Call CS-Domain IMSI (DS-41)

8.3.1.10.5 Test requirement

After step 4 the UE shall remain in the idle mode and not respond to the paging message sent on PCCH.

After step 5 the UE shall remain in the idle mode and not respond to the paging message addressed to it on the DCCH.

8.3.1.11 Cell Update: Success after T302 time-out

8.3.1.11.1 Definition

8.3.1.11.2 Conformance requirement

The UE transmits a CELL UPDATE message to the UTRAN when it needs to update the UTRAN with the current cell of the UE. When the UE does not receive a CELL UPDATE CONFIRM message upon expiry of timer T302, the UE transmits a CELL UPDATE message repeatedly until its internal counter V302 counter is greater than N302.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.11.3 Test purpose

To confirm that the UE repeats the transmission of CELL UPDATE message upon the expiry of timer T302, after failing to receive any response from the SS during T302 timer period.

8.3.1.11.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH

Test Procedure

At the start of the test, the UE is brought to CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH. The IE "Cell update cause" in this message shall be set to "periodic cell update". SS ignores this message, and the UE shall then re-transmit a CELL UPDATE message after the expiry of timer T302. When the SS has received (N302+1) such messages, it transmits a CELL UPDATE CONFIRM message with new values for "C-RNTI" to the UE. Finally, the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE starts from CELL_FACH state. SS initializes its internal counter K to 0 and wait until the expiry of T302 timer.
2		→	CELL UPDATE	The value "periodic cell update" shall be set in IE" Cell update cause" after the expiry of timer T305.
3				If K is equal to N302 then proceeds to step 5.
4				SS increments counter K, transmits no response to the UE and waits for an additional period equals to the value of timer T302. The next step is step 2.
5		←	CELL UPDATE CONFIRM	The message includes IEs" new C-RNTI". The IE"DRX Indicator" is set to "No DRX".
6		→	RNTI REALLOCATION COMPLETE	

Specific Message Contents

CELL UPDATE (Step 2)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if it is present
<u>Hyper frame number</u>	Check to see if set to 'Periodic cell updating'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exception:

Information Element	Value/remark
New C-RNTI	Set to an arbitrary string different from '0000 0000 0000 0001'

8.3.1.11.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 then transmit a CELL UPDATE message on the uplink CCCH, setting "periodic cell update" into IE" Cell update cause".

After step 2 the UE shall re-transmits a CELL UPDATE message after the expiry of timer T302. A total of (N302+1) transmissions shall be detected in SS.

After step5 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH and stays at CELL_FACH state.

8.3.1.12 Cell Update: Failure (After Maximum Re-transmissions)

8.3.1.12.1 Definition

8.3.1.12.2 Conformance requirement

The UE transmits a CELL UPDATE message to the UTRAN when it needs to update UTRAN with information on the current cell of the UE. If the UE fails to receive a CELL UPDATE CONFIRM message, it re-transmits a CELL UPDATE message repeatedly upon the expiry of timer T302 until the value of V302 counter is greater than N302. If V302 is greater than N302, the UE stop the re-transmission and enters idle state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.12.3 Test purpose

To confirm that the UE repeats the cell update procedure at the expiry of timer T302 and moves to idle state when its internal counter V302 is greater than N302.

8.3.1.12.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodic cell updating procedure. The SS ignores this message, and the UE shall attempt to re-transmit a CELL UPDATE message up to a maximum of (N302+1) times after the expiry of timer T302. After (N302+1) attempts, the UE shall return to idle state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS sets its internal counter K=1 and waits for a period equals to timer value T302. If CELL UPDATE message is received upon timer expiry, proceeds to step 2. Else goes to step 5.
2		→	CELL UPDATE	The value "periodic cell update" should be set in IE" Cell update cause" and this message should be sent for each expiry of timer T302.
3				SS transmits no response to the UE and increments counter K.
4				SS waits for an additional period equals to T302 timer. If CELL UPDATE message is received, proceed to step 2. Otherwise, terminates the test. If K is not equal to N302, the test should be considered as a failure.

Specific Message Contents

CELL UPDATE (Step 2)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	<u>Check to see if it is present</u>
<u>Hyper frame number</u>	Check to see if set to 'Periodic cell updating'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

8.3.1.12.5 Test requirement

After step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodic cell update" into IE" Cell update cause".

After step 4 the counter K in SS shall be equal to N302.

8.3.1.13 Cell Update: Reception of Invalid CELL UPDATE CONFIRM Message

8.3.1.13.1 Definition

8.3.1.13.2 Conformance Requirement

If the UE encounters an invalid CELL UPDATE CONFIRM message while executing a cell update procedure, it shall check the current value of its internal counter V302. If V302 is not greater than N302, the UE shall set contexts pertaining to protocol error, re-transmits CELL UPDATE message on uplink CCCH, restart T302 timer and increments V302. It shall use the same "Cell Update Cause" as before receiving the invalid downlink message. On the other hand, if V302 is greater than N302, the UE shall abandon cell update procedure and enters idle mode.

8.3.1.13.3 Test Purpose

To confirm that the UE retransmits CELL UPDATE message when it receives an erroneous CELL UPDATE message, if the number of retransmissions is not the maximum allowed value. To confirm that the UE returns to idle mode after sending maximum allowed number of CELL UPDATE messages without receiving a valid CELL UPDATE CONFIRM message.

8.3.1.13.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall start to transmit CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with a CELL UPDATE CONFIRM message containing a protocol error in IE"DRX Indicator". The UE shall detect the protocol error and re-transmit CELL UPDATE message up to a maximum of N302 times. The time interval between the transmissions shall be approximately equal to T302. SS verifies that it receives a total of (N302+1) identical CELL UPDATE messages. The UE shall return to idle mode after all uplink transmissions have finished. SS verifies this by paging the UE using the U-RNTI identity. The UE shall not respond to this page.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS sets its internal counter K=0 and waits for a period equals to timer value T302. If CELL UPDATE message is received upon timer expiry, proceeds to step 2. Else goes to step 5.
2		→	CELL UPDATE	The value "paging response" should be set in IE" Cell update cause".
3		←	CELL UPDATE CONFIRM	SS transmits an invalid message. SS increments K.
4		→	CELL UPDATE	SS waits for T302 timer to expire. The UE shall send CELL UPDATE message.
5				If a CELL UPDATE message is received in step 4, SS increments K, restart T302 timer and returns to execute step 4. Else, SS proceeds to step 6.
6				SS verifies that K = (N302+1) and proceeds to the next step. Else, the test fails.
7		←	PAGING TYPE 1	SS pages the UE.
8				UE shall not respond.

Specific Message Content

CELL UPDATE (Step 2 and 4)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Paging Response' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108, with the following exception:

Information Element	Value/remark
DRX Indicator	Use one of the spare values.

Paging Type 1 (Step 7)

Information Element	Value/remark
Page record list - Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI BCCH Modification info	UTRAN Originator Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not Present.

8.3.1.13.5 Test Requirement

After step 3 the UE shall continue to transmit CELL UPDATE message for N302 times.

At step 6 the counter K should be equal to (N302+1).

After step 7 the UE shall return to idle mode and not respond the PAGING TYPE 1 message sent by the SS.

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these case. When the UTRAN receives this message, it is able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause "RB Control" when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active, with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and been allocated dedicated physical resources. Next SS send RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the UE sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel be released. However, this message does not contain information about the target cell to select when transiting to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to "RB Control" on the CCCH carried by PRACH physical channel, specified in cell 2's system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE "PRACH Info" and "Secondary CCPCH Info". To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on CCCH of cell 2. IE"Cell update cause" should be set to "RB Control". IE"DRX Indicator" set to "No DRX".
6		←	CELL UPDATE CONFIRM	IE"PRACH Info" and IE"Secondary CCPCH Info" are included in this message.
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information for setup - RAB Info - RAB Identity - CN Domain Identity - RB Info to setup list - RB Info to setup - RB Identity - PDCP Info - RLC Info - RB Mapping Info	4 PS 4 Not Present. Use the same RLC configuration as in TS 34.108. Use the same RLC multiplexing scheme as in TS 34.108. Not Present.
RB to be affected list UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS addition information - CHOICE CTFC Size - CTFC Information - x bit CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present – use default value, all TFCs are allowed. FDD Normal Addition Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel
Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE RLC mode - Octet mode RLC size info type 1 - CHOICE Octet mode RLC size - Size part 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 Dedicated transport channels 1 Octet Mode RLC size info type 1 Size type 1 16 Use the same settings as in TS 34.108
DL Transport Channel information common to all transport channels Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present. 2 Same as the TFS used in the uplink specified in this message.
Frequency info Maximum allow UL TX power	Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class.
CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present. Not Present. Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled “Packet to CELL_DCH from CELL_DCH in PS” found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark

RAB information to release list	4
- RB Identity	
RB information to be affected list	DCCH for RRC (UM)
- RB information to be affected	0
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	1
- Logical channel identity	1
- RB information to be affected	DCCH for RRC (AM)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
- RB information to be affected	DCCH for NAS_DT-AM High Priority
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
- RB information to be affected	DCCH for NAS_DT-AM Low Priority
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
UL Transport Channel information common to all transport channels	
- TFC Subset	Not Present – use default value, all TFCs are allowed.
- CHOICE Mode	FDD
- UL DCH TFCS	Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2.
Deleted TrCH information list (uplink)	Not Present.
Added or Reconfigured TrCH information list	
- Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2.
DL Transport Channel information common to all transport channels	
- SCCPCH TFCS	Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2.
- DL DCH TFCS	Not Present.
Deleted TrCH information list (downlink)	
Added or Reconfigured TrCH information list	Not Present.
- Added or Reconfigured DL TrCH information	

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	<u>Check to see if it is present</u>
<u>Hyper frame number</u>	Check to see if set to 'RB Control'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE "Cell Update Cause" shall be set to "RB Control".

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel broadcasted on the system information message in cell 2.

8.3.1.15 Cell Update: Acknowledged Mode RLC Reset

8.3.1.15.1 Definition

8.3.1.15.2 Conformance Requirement

In CELL_FACH, the UE shall ensure that all AM RLC entities (for both signalling links and u-plane links) are operational. In the event that an unrecoverable error (detectable when the amount of retransmissions of RESET_PDU reaches the value of MAX_DAT and the UE fails to receive any acknowledgements), the UE shall trigger cell update procedure to report this event. The UE shall send CELL UPDATE message on the uplink CCCH and set the appropriate AM_RLC error indicator IE(s) to TRUE. After receiving the CELL UPDATE CONFIRM message, the UE shall reset the affected AM RLC entities and then resume transmission and reception activities.

8.3.1.15.3 Test Purpose

To confirm that the UE reports the occurrence of an unrecoverable error in a C-plane AM RLC entity by initiating a cell update procedure. To confirm that the UE is able to resume normal C-plane data transmission and reception after the completion of cell update procedure.

8.3.1.15.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: Idle Mode

Test Procedure

The UE is initially in idle mode and camped onto cell 1. SS pages the UE using the IMSI identity stored in the test USIM card, with the cause stated as "Terminating PS Data Call". The UE shall respond by transmitting the RRC CONNECTION REQUEST message on the uplink CCCH, triggering the start of RRC

connection establishment procedure. SS assigns common physical resources to the UE by sending RRC CONNECTION SETUP message. The UE shall reply with RRC CONNECTION SETUP COMPLETE on the DCCH before transiting to CELL_FACH state. Next, SS sends RADIO BEARER SETUP message on the DCCH using AM mode to establish a DTCH logical channel for u-plane packet data transfer. The UE shall reply with a RADIO BEARER SETUP COMPLETE message, sent using AM RLC on the DCCH. Then it activates the associated DTCH logical channel for user data transmission and reception. SS does not acknowledge the RADIO BEARER SETUP COMPLETE message. The UE shall continue to transmit the AM PDU carrying RADIO BEARER COMPLETE message until the maximum re-transmission count is reached. Thereafter, the UE shall start sending RESET PDUs to request that the AM RLC entity for RRC signalling be re-initialized. SS ignores the requests and wait for a duration equivalent to the period equivalent to (MAX_RST+1) times expiry of Timer_RST. This figure is specified in IE"RLC info" of RADIO BEARER SETUP message in step 6. At this point, the UE shall initiate a cell update procedure by transmitting CELL UPDATE message on the uplink CCCH. The CELL UPDATE message shall specify the value "TRUE" in IE"AM_RLC error indicator (for C-plane)". SS replies with CELL UPDATE CONFIRM message using the default message content. SS then pages the UE using PAGING TYPE 2 message. The UE shall respond by sending an UPLINK DIRECT TRANSFER message on the uplink DCCH, which shall be embedded in an PDU originating from the AM RLC entity for RRC signalling.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is initially in idle mode.
2		←	PAGING TYPE 1	SS pages the UE, citing the reason "Terminating PS data call" in the PAGING TYPE 1 message.
3		→	RRC CONNECTION REQUEST	Sent on CCCH using Transparent mode.
4		←	RRC CONNECTION SETUP	Allocate common physical resources for signalling RBs.
5		→	RRC CONNECTION SETUP COMPLETE	Sent on CCCH using Transparent mode.
6		←	RADIO BEARER SETUP	Establishes a DTCH logical channel operating in AM mode.
7		→	RADIO BEARER SETUP COMPLETE	UE shall stay in CELL_FACH state. SS does not acknowledge this AM PDU. The UE shall re-transmit this AM PDU until the maximum number has been reached.
8				UE shall start to transmit RESET PDU using AM RLC on the DCCH. SS does not respond to any PDU frames originating from the UE, and it waits for a period equivalent to (MAX_RST+1) times expiry of Timer_RST. This figure is specified in IE"RLC info" of RADIO BEARER SETUP message in step 6.
9		→	CELL UPDATE	UE shall send this message on CCCH. IE"AM_RLC Error Indication (for C-plane)" shall be set to 'TRUE'
10		←	CELL UPDATE CONFIRM	"DRX Indicator" set to "No DRX". UE shall transit to CELL_FACH state.
11		←	PAGING TYPE 2	SS pages the UE.
12		→	UPLINK DIRECT TRANSFER	This message shall be transmitted using AM RLC for RRC signalling on the uplink DCCH.

Specific Message Contents

PAGING TYPE 1 (Step 2)

Use the same message sub-type entitled "TM (Packet in PS)" found in Clause 9 of TS34.108.

RRC CONNECTION REQUEST (Step 3)

Information Element	Value/remark
Initial UE Identity	Check to see if set to same value as the IMSI identity stored in the test USIM card.
Initial UE Capability	
- Maximum number of AM entities	Check to see if set to '4 to 8' or '16 to 32'.
Establishment Cause	Check to see if set to 'Terminating PS Call'.
Protocol Error Indicator	Check to see if set to 'FALSE'.
Measured Results on RACH	Not checked.

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type entitled "Transition to CELL_FACH" found in Clause 9 of TS34.108.

RRC CONNECTION SETUP COMPLETE (Step 5)

Only the message type IE is checked in this message.

RADIO BEARER SETUP (Step 6)

Use the same message sub-type entitled "Packet to CELL_FACH from CELL_FACH in PS" found in Clause 9 of TS34.108.

RADIO BEARER SETUP COMPLETE (Step 7)

Only the message type IE is checked for this message.

CELL UPDATE (Step 9)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'TRUE'
AM_RLC error indicator (for U-plane)	Check to see if it is present
<u>Hyper frame number</u>	Not checked
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in Clause 9 of TS34.108.

PAGING TYPE 2 (Step 11)

Information Element	Values/Remarks
Paging cause	Terminating PS Data Call
CN domain identity	PS Domain
Paging Record Type Identifier	Supported IMSI

UPLINK DIRECT TRANSFER (Step 12)

Only the message type IE is checked for this message.

8.3.1.15.5 Test Requirement

After step 8 the UE shall transmit a CELL UPDATE message on the uplink CCCH to report the occurrence of an unrecoverable error in AM RLC entity for C-plane data.

After step 11 the UE shall send a UPLINK DIRECT TRANSFER message on the uplink DCCH. This message shall be sent using the AM RLC entity for RRC signalling.

8.3.3.1.1 Definition

8.3.3.1.2 Conformance requirement

This procedure is used by the network to assign a new RNTI identity to the UE. It is initiated by the UTRAN when it sends an RNTI REALLOCATION message, which includes a new C-RNTI and/or U-RNTI on the downlink DCCH. The UE starts to use the new identities and transmits an RNTI REALLOCATION COMPLETE message to the UTRAN on the uplink DCCH.

Reference

3GPP TS 25.331 clause 8.3.3

8.3.3.1.3 Test purpose

To confirm that the UE starts to use the new identities after it receives an RNTI REALLOCATION message from the SS. To confirm that the UE use the new U-RNTI identity to calculate the applicable paging occasions.

[Editor's note] In this test case, it is assumed that the paging occasion during connected states can is determined using U-RNTI. From TS 25.304 Clause 8, this assumption cannot be confirmed. Further clarification is required regarding this issue.

8.3.3.1.4 Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_FACH

Test Procedure

Initially, the UE is in the CELL_FACH state and it has been assigned a C-RNTI and U-RNTI. The SS transmits an RNTI REALLOCATION message which includes new C-RNTI and U-RNTI to the UE. Then the UE shall transmit an RNTI REALLOCATION COMPLETE message as confirmation and transits to CELL_PCH state. SS pages the UE by sending a PAGING TYPE 1 message and specifying the newly assigned U-RNTI identity in this message. The UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH which includes the U-RNTI identical to that found in RNTI REALLOCATION message received in step 2. The CELL UPDATE message shall also contain IE "Cell update cause" with this IE set to "paging response". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes IE "DRX Indicator" set to value "No DRX" to the UE on the downlink DCCH. The UE shall return to CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of the UE is CELL_FACH state. UE has been allocated both C-RNTI and U-RNTI during RRC connection establishment phase.
2		←	RNTI REALLOCATION	Contains new C-RNTI and U-RNTI identities.
3		→	RNTI REALLOCATION COMPLETE	
4		←	PAGING TYPE 1	SS pages the UE using the new U-RNTI allocated in step 2.
5		→	CELL UPDATE	UE shall trigger cell updating. The message shall indicate the same U-RNTI assigned in the RNTI REALLOCATION message in step 2.
6		←	CELL UPDATE CONFIRM	IE "DRX indicator" is set to "No DRX".

Specific Message Content

RNTI REALLOCATION (Step 2)

Use the same message sub-type as in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI DRX Indicator	'0000 0000 0001' '0101 0101 0101 0101 0101' '1010 1010 1010 1010' DRX with cell updating

RNTI REALLOCATION COMPLETE (Step 3) Only the message type IE is checked in this message.

PAGING TYPE 1 (Step 4)

Use the same message sub-type as in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
Page Record List - Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI BCCH modification info	UTRAN originator '0000 0000 0001' '0101 0101 0101 0101 0101' Not Present

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0101 0101 0101 0101 0101' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if it is present</u> Check to see if set to 'Paging Response' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type as in TS 34.108 Clause 8.

8.3.3.1.5 Test requirement

After step 2 the UE shall transmit an RNTI REALLOCATION COMPLETE message on the uplink DCCH. The MAC PDU carrying this message shall comprise either the new C-RNTI or U-RNTI allocated in the "UE-id" field of the MAC header.

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE" Cell update cause" set to "paging response". The IE"U-RNTI" shall be identical to the IE"New RNTI" found in RNTI REALLOCATION message sent by the SS in step 2.

8.3.3.2 RNTI reallocation: Failure (Invalid message reception)

8.3.3.2.1 Definition

8.3.3.2.2 Conformance Requirements

When the UE receives an RNTI REALLOCATION message, which contains an error in one of the mandatory IE, it shall transmit a RNTI REALLOCATION FAILURE message on the DCCH using AM RLC and set the value "protocol error" in the IE"failure cause". The IE"protocol error information" in this message shall also be set to an appropriate value. The UE shall not utilize any identities relayed in the erroneous message, and it shall resume normal operations.

8.3.3.2.3 Test Purpose

To confirm that the UE ignore the new connected mode identities conveyed in an erroneous RNTI REALLOCATION message. To confirm that the UE report this event to the UTRAN by sending RNTI REALLOCATION FAILURE message, stating the appropriate failure cause and information.

8.3.3.2.4 Method of test

Initial Conditions

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is brought to CELL_FACH state. SS transmits a RNTI REALLOCATION message to the UE on the DCCH using UM-RLC mode. In this message, the IE"DRx Indicator" is set to one of the spare values. A new U-RNTI identity is also present in this message. The UE shall respond by transmitting the RNTI REALLOCATION FAILURE message, indicating "protocol error" in IE"failure cause" and also "Information element not comprehended" in IE"Protocol error information". After receiving the RNTI REALLOCATION FAILURE message, SS waits for a duration to allow T305 to expire. The UE shall transmit CELL UPDATE message with the original U-RNTI identity assigned. SS complete this test by sending CELL UPDATE CONFIRM message to the UE on the downlink DCCH.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of the UE is CELL_FACH state.
2		←	RNTI REALLOCATION	Contains a new U-RNTI identity, but a spare value is used in the IE"DRx indicator"
3		→	RNTI REALLOCATION FAILURE	UE shall transmit this message to report the error in RNTI REALLOCATION message. It shall include the appropriate cause in the message.
4				SS waits for a period up to timer T305 to allow the UE to start performing a cell updating procedure.
5		→	CELL UPDATE	UE shall trigger periodic cell updating. The message shall not contain the U-RNTI given in the RNTI REALLOCATION message in step 2.
6		←	CELL UPDATE CONFIRM	

Specific Message Content

RNTI REALLOCATION (Step 2)

Use the same message sub-type as in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 00011B
DRX Indicator	Set to one of the spare value

RNTI REALLOCATION FAILURE (Step 3)

Information Element	Value/remark
Failure Cause Protocol Error Information	Check to see if set to 'Protocol error' Check to see if set to 'Information Element not comprehended'

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	Shall be the same as the original U-RNTI allocated Check to see if set to '0000 0000 0000 0001'B Check to see if set to '0000 0000 0000 0000 0000 0001'B
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
<u>Hyper frame number</u>	<u>Check to see if it is present</u>
Cell update cause	Check to see if set to 'Periodic Cell Updating'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type as in TS 34.108 Clause 8

8.3.3.2.5 Test Requirement

After step 2 the UE shall transmit RNTI REALLOCATION FAILURE message, indicating the value "protocol error" in IE"failure cause" and also "information element not comprehended" in IE"protocol error information".

After step 4 the UE shall initiate a periodic cell updating procedure by transmitting CELL UPDATE message on the CCCH. In this message, the U-RNTI identity shall be set to the same value as assigned during the RRC connection establishment procedure.

8.4.1.3 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

During a transition from idle mode to CELL_FACH state, the UE shall start to monitor neighbouring cells listed in the IE"Intra-frequency cell info" received in SYSTEM INFORMATION BLOCK TYPE 12 (or 11). If a measurement report criteria is also specified, the UE shall store this information and apply these rules when deciding to transmit MEASUREMENT REPORT messages during a subsequent transition to CELL_DCH state. If reporting during RACH transmissions are dictated by the UTRAN, the UE shall append the relevant measurement information when sending messages on RACH (e.g. RRC CONNECTION REQUEST and CELL UPDATE).

Reference

3GPP TS 25.331, clause 8.4.1.9

8.4.1.3.3 Test Purpose

To confirm that the UE begins to monitor the neighbouring cells in the monitored list after it has entered the CELL_FACH state. The list of neighbouring cell can be known from SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages. If information regarding the intra-frequency measurement report criteria is also broadcasted, the UE shall save this information and apply the criteria during a subsequent transition to CELL_DCH state. If RACH measurement reporting is dictated in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, the UE shall include these measurements when transmitting on the RACH channel.

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active. Cell 2 is transmitting at 15 dB below cell 1.

UE : idle state and camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = “intra-frequency measurement”, measurement quantity = “CPICH Ec/No”, report criteria = “periodic reporting criteria”, reporting interval = “12 seconds”. In the system information message, reporting of CPICH Ec/No is also required for intra-frequency reporting when transmitting RACH messages to cell 1.

SS pages the UE with the cause “Incoming packet-switched call”. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH (FACH) physical channels for uplink and downlink use. UE shall then enter CELL_FACH state. SS waits until timer T305 expires, the UE shall send a CELL UPDATE message including the measurement reading of cell 2's CPICH Ec/No values. SS then reply with CELL UPDATE CONFIRM message without changing the physical channel resources.

In the next sequence, SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates DPDCH channels to the UE. The UE shall transit to CELL_DCH state and send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcasted on SYSTEM INFORMATION BLOCK TYPE 12 (or 11) when the UE was still in idle mode.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 2, SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 15dB below that of cell 1. SYSTEM INFORMATION TYPE 2 and 12 to be transmitted are different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE, stating the cause as an incoming packet-switched call.
3		→	RRC CONNECTION REQUEST	The Ec/No value of P-CPICH of Cell 1 should be reported.
4		←	RRC CONNECTION SETUP	SS allocates common physical channels to UE.
5		→	RRC CONNECTION COMPLETE	UE shall enter CELL_FACH state, transmits this message to acknowledge the SETUP message.
6				SS waits for 5 minutes (for the expiry of T305 timer), so that UE will initiate a periodic cell updating procedure.
7		→	CELL UPDATE	This message shall contain measurement readings of CPICH Ec/No for cell 1.

8	←	CELL UPDATE CONFIRM	SS does not change the physical channel allocation.
9	←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns DPCH physical resources to the UE, but keeping parameters for transport channels and RBs unchanged.
10	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state after sending this message.
11	→	MEASUREMENT REPORT	UE shall begin to report cell 2's CPICH Ec/No value periodically at 12 seconds interval. The measurement identity shall match that broadcasted in step 1

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 2

Information Element	Value/Remarks
UE Timers and constants in connected mode - T305	5 minutes.

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	
FACH measurement occasion info	
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	5
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin - Intra-frequency	-20dB, -115dBm
measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	
	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	Not present
- Reporting quantities for monitored set cells	Periodical reporting criteria
- CHOICE report criteria	Infinity
- Amount of reporting	12 seconds
- Reporting interval	Not Present
- Reporting Cell Status	Not Present
- Inter-frequency measurement system information	
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	

PAGING TYPE 1

Information Element	Value/Remarks
Paging record list - Paging Record - CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE identity - IMSI (DS-41)	CN Originator Terminating PS Data Call, PS Domain IMSI (DS-41) Set to the same IMSI (DS-41) digits found in the test USIM.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Initial UE Identity Establishment cause Measured results on RACH - Measured result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measured results for monitored cells	Check to see if it is the same as in PAGING TYPE 1 message Check to see if set to "Paging Response" Check to see if value is present Check to see if this IE is absent

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) <u>Hyper frame number</u> Cell update cause Protocol error indicator Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measurement results for monitored cells Protocol error information	Check to see if set to same U-RNTI value assigned in RRC CONNECTION SETUP message. Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' <u>Check to see if this IE is present</u> Check to see if set to 'Periodic cell updating' Check to see if set to 'FALSE' CPICH Ec/No Checked to see if set to within an acceptable range. Checked to see if this IE is not present. Check to see if set to 'FALSE'

PHYSICAL CHANNEL RECONFIGURATION

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH".

MEASUREMENT REPORT

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is within acceptable range
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

8.4.1.3.5 Test Requirement

After step 3 the UE shall send RRC CONNECTION REQUEST message in response to the paging message sent by the SS, which includes reading of the current cell's CPICH Ec/No value.

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages.

After step 6 the UE shall initiate cell updating procedure by transmitting CELL UPDATE message. In this message, the cause shall be set to "periodic cell updating". It shall include measurement readings for the current cell (cell 1) CPICH Ec/No measurement quantity.

After step 10 the UE shall move to CELL_DCH state and transmit MEASUREMENT REPORT messages at 12 seconds interval. In these messages, neighbouring cell 2's CPICH Ec/No value shall be reported. The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in SYSTEM INFORMATION BLOCK TYPE 12 messages transmitted in step 1.

8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.4.1 Definition

8.4.1.4.2 Conformance requirement

After entering CELL_FACH state from idle mode, the UE shall start to monitor the list of "inter-frequency" neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages on BCCH/FACH.

Reference

3GPP TS 25.331, clause 8.4.1.10

8.4.1.4.3 Test Purpose

To confirm that the UE begins to monitor the list of neighbouring cell assigned in the IE "inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, after it enters CELL_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

8.4.1.4.3 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a downlink transmission level for CPICH RSCP at -40 dBm, cell 2 is also active but with a transmission power 10dB below cell 1. The carrier frequency of cell 2 in

the uplink direction is 1 UARFCN above that of cell 2, and the downlink carrier is 1 UARFCN below that of cell 1.

UE : idle state and has successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list for inter-frequency measurement type. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH Ec/No".

SS pages the UE with the cause "Incoming packet-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH channel in the uplink and S-CCPCH(FACH) channel on the downlink to the UE. UE then moves to CELL_FACH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from inter-frequency cells belonging to the monitored set. SS decreases the transmission power of CPICH in cell 1 by 10dB. At the same time, it raises the corresponding downlink transmission power of cell 2 by 10dB. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to report this event. Upon receiving this message, SS replies with the default CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	SS allocates PRACH and S-CCPCH resources to UE
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_FACH state.
6				SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.
7				SS decreases the transmission power of cell 1 by 10dB and increases cell 2's downlink power by 10dB.
8		→	CELL UPDATE	UE shall detect that cell 2 has become stronger than cell 1. It sends this message after reselecting to cell 2
9		←	CELL UPDATE CONFIRM	Use default message.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 12

clauseInformation Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	2
- k_UTRA	Not Present
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	Not Present
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	Not Present
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	Not Present
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	Set to the next uplink UARFCN after cell 1
- UARFCN uplink (Nu)	Set to the previous downlink UARFCN before cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	0 dB
- Cell individual offset	0 chips
- Reference time difference to cell	0 chips
- Primary CPICH Info	Set to same code as used for cell 2
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	FALSE
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-frequency measurement quantity	Inter-frequency reporting criteria
CHOICE Reporting criteria	0
- Filter coefficient	CPICH Ec/No
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	CPICH Ec/No
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	2.0dB
- Hysteresis	0 sec
- Time to trigger	Infinity
- Amount of reporting	0
- Reporting interval	Not Present
- Parameters required for each non used frequency	Not Present
- Threshold non-used frequency	-55dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

PAGING TYPE 1

For this message, use the same message contents as in step 2 of clause 8. 4.1.3.3.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content defined in TS 34.108 Clause 8, which is marked as "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
<u>Hyper frame number</u>	<u>Check to see if this IE is present</u>
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the message sub-type in default message content defined in TS 34.108 Clause 8.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity for cell 2.

After step 7 the UE shall reselect to cell 2 and transmit a CELL UPDATE message on the uplink CCCH of cell 2.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.5.1 Definition

8.4.1.5.2 Conformance requirement

After entering CELL_FACH state from CELL_DCH state, the UE shall terminate intra-frequency type measurement reporting originating from a previous MEASUREMENT CONTROL message. If indicated in the system information messages, the UE shall start to monitor neighbouring cells. The UE shall apply the reporting criteria specified in system information during a subsequent return to CELL_DCH state. If requested to perform measurement reporting on RACH channels, the UE shall append the measured results when transmitting uplink RACH messages.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.5.3 Test Purpose

To confirm that the UE ceases to perform intra-frequency measurement specified in a previously received MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state. To confirm that the UE read the system information when in CELL_FACH state and starts to monitor the neighbouring cells as indicated in system information messages. To confirm that the UE performs measurements on uplink RACH channel and append the measured results in RACH messages, when requested in the system information messages.

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, but the transmitter of cell 3 is switched off. Cell 1 is transmitting its CPICH (RSCP) at 20 dB above cell 2. The downlink UTRA carriers transmission strength for cell 1 is identical to that of cell 2.

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode and has selected cell 1 as the current cell. SYSTEM INFORMATION BLOCK TYPE 12 message is modified from its default message contents, in order to prevent the reporting of CFN-SFN difference. No measurement requirements are specified for the UE in system information block (type 11 and 12) messages.

SS then prompts the test operator to initiate an outgoing call. When UE transmits a RRC CONNECTION REQUEST message on RACH, SS replies with RRC CONNECTION SETUP message. Uplink and downlink DPDCH physical channels are allocated. Upon receiving RRC CONNECTION SETUP message, the UE shall transmit RRC CONNECTION SETUP COMPLETE message on DCCH and then moves to CELL_DCH state. SS then sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement, based on an estimation of cell 2's CPICH E_c/N_o . At the same time, reporting of cell 2's CPICH is commanded with the reporting criteria set to "periodic reporting" and reporting interval set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message, triggering a switch of transport channels from DCH/DCH to RACH/FACH. After receiving this message, the UE shall reconfigure itself and replies with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS acknowledges this message and the UE shall move to CELL_FACH state and read the system information messages. SS monitors the uplink to verify that no MEASUREMENT REPORT messages are received. In SYSTEM INFORMATION BLOCK TYPE 12 message, SS includes cell 3 into the neighbour cells monitoring list. IE "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in this message. An event-triggered (event type 1a) reporting criterion is specified for intra-frequency measurements. The transmission strength of CPICH for cell 3 is increased until it exceeds the lower bound of the reporting range specified. SS then pages for the UE using PAGING TYPE 1 message. The UE shall respond with a CELL UPDATE message, which comprises CPICH E_c/N_o measurements for cell 1 and 3. Upon the receipt of CELL UPDATE message, SS replies with CELL UPDATE CONFIRM message. This message does not change the physical resource nor allocate any new RNTI identities. The UE shall remain in CELL_FACH state. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, this time specifying dedicated physical resources for both uplink and downlink direction. The UE shall then send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages. SS verifies that all messages received pertain to the periodic measured value of cell 2's CPICH E_c/N_o value. UE shall not send any reports containing the measured values of cell 3.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and test operator is asked to make an outgoing call.
2		→	RRC CONNECTION REQUEST	
3		←	RRC CONNECTION SETUP	Uplink and downlink DPCH resources are allocated.
4		→	RRC CONNECTION SETUP COMPLETE	UE shall move to CELL_DCH state.
5		←	MEASUREMENT CONTROL	SS requests for measurement and reporting of cell 2's CPICH Ec/No value.
6		→	MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval. SS waits for 2 consecutive reports before proceeding to step 7.
7		←	PHYSICAL CHANNEL RECONFIGURATION	SS switches the physical resources to common physical channels.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall reconfigure its uplink and downlink channels before transiting to CELL_FACH state.
9		←	SYSTEM INFORMATION BLOCK TYPE 12	SS includes cell 3 into the monitored neighbour cell list. SS waits for 1 minutes and verifies that no MEASUREMENT REPORT messages are received. Cell 3 is switched on, and SS adjusts the transmission power for CPICH such that its Ec/No falls into the report range specified.
10		←	PAGING TYPE 1	SS pages for UE using the assigned U-RNTI identity.
11		→	CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and 3 appended.
12		←	CELL UPDATE CONFIRM	No change in physical resource allocation and RNTI identities.
13		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates dedicated physical channels.
14		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
15		←	MEASUREMENT REPORT	UE shall continue to report cell 2's CPICH Ec/No value on a periodic basis.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Transition to CELL_DCH”.

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	5
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	
- CHOICE measurement	Check to see if set to “Intra-frequency measured results list”
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Packet to CELL_FACH from CELL_DCH in PS)”

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	6
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	Only 1 reporting event is defined
- Intra-frequency event identity	1a
- Triggering condition	Monitored set cells
- Reporting range	10.0 dB
- Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- Reporting Threshold	Not Present
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting Interval	8 seconds
- Inter-frequency measurement system information	Not present
- Inter-system measurement system information	Not present
- Traffic volume measurement system information	Not present
- UE internal measurement system information	Not present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

PAGING TYPE 1

Information Element	Value/Remarks
Page Record List - Page Record - CHOICE Paging originator - U-RNTI	UTRAN Originator Set to same U-RNTI value as assigned in the RRC CONNECTION SETUP message
BCCH modification info	Not Present

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
<u>Hyper frame number</u>	Check to see if it is present
Cell update cause	Check to see if it is set to "Paging Response"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measurement results for monitored cells - SFN-SFN observed time difference - Primary CPICH info - Primary scrambling code - CHOICE measurement quantity - CPICH Ec/No	Check to see if set to CPICH Ec/No Check to see if it is within acceptable range Not Checked Check to see if the same as cell 3's code. Check to see if set to CPICH Ec/No Check to see if it is within acceptable range Check to see if it is absent
Protocol error information	

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH in PS")

MEASUREMENT REPORT (Step 15)

The contents of this message should be the same as in step 6.

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain the measured result of cell 2's CPICH Ec/No value.

After step 8, the UE shall not send any MEASUREMENT REPORT messages which report quantities requested in MEASUREMENT CONTROL messages in step 5.

After step 10, the UE shall respond to the paging and transmit a CELL UPDATE message. In this message, the measured values CPICH Ec/No for cell 1 and cell 3 shall be included.

After step 14, the UE shall revert to the original measurement reporting mechanism and send MEASUREMENT REPORT messages containing estimates for cell 2's CPICH Ec/No value. The UE shall not transmit any MEASUREMENT REPORT messages, which indicate measurement quantities of cell 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

When transiting from CELL_DCH state to CELL_FACH state, the UE shall terminate all reporting activities related to inter-frequency measurements. After reaching CELL_FACH state, the UE shall begin to monitor neighbouring cells listed in the IE "inter-frequency cell info" of the system information type 12 message.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.6.3 Test Purpose

To verify that UE ceases to transmit MEASUREMENT REPORT messages when moving from CELL_DCH state to CELL_FACH, even if it has detected that reporting criteria have been satisfied in CELL_FACH state. To verify that the UE extracts information for inter-frequency measurement from system information messages after reaching CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

SS: 2 cells – Cell 1 is active while cell 2 is inactive. Cell 2 is allocated a frequency which is 1 UARFCN away from cell 1 in both uplink and downlink directions. The applicable radio conditions for cell 1 and cell 2 are as follow:

	Cell 1	Cell 2
UARFCN (N_u and N_d)	Channel 1	Channel 2
CPICH RSCP	-75 dBm	-85 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm
S	15	5

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode. SS pages the UE with the establishment cause set to "Terminating PS Data Call". The SYSTEM INFORMATION TYPE 12 message is modified so that no measurement tasks are to be performed by the UE. The UE shall respond to the paging by sending a RRC CONNECTION REQUEST message on the PRACH. Upon receiving this message, SS allocates dedicated DPDCH physical channels to the UE by transmitting RRC CONNECTION SETUP message. The UE shall reply by transmitting a RRC CONNECTION SETUP COMPLETE message. SS then checks the IE "Measurement Capability" of this message and verifies that the UE is capable of performing inter-frequency measurements under FDD mode. After the confirmation of the UE inter-frequency measurement ability, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, information related to the radio bearers and uplink/downlink radio resources remain unchanged as compared to the equivalent IEs found in RRC CONNECTION SETUP message. The only difference concerns IE "DPCH compressed mode info", which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS then send a MEASUREMENT CONTROL message to the UE, specifying that cell 2 be the measurement object for inter-frequency type measurement. The periodic reporting criterion is selected for this measurement. SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing measured result of cell 2's reporting quantity (CPICH Ec/No). SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, requesting the UE to switch its uplink and downlink DPDCH to common physical channels. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then moves to CELL_FACH state. SS waits for another 8 seconds to detect any possible uplink MEASUREMENT REPORT messages as a result of inter-frequency measurements. SS then increases the transmission power of cell 2 by 20 dBm. SS waits for [x] seconds to allow the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message

on the uplink CCCH of cell 2, specifying the cause as “cell re-selection”. SS replies with CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and camped onto cell 1. SYSTEM INFORMATION BLOCK TYPE 12 is redefined, disabling all measurement and reporting activities.
2		←	PAGING TYPE 1	SS pages UE with cause set to “incoming circuit-switched call”
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	Uplink and downlink DPDCH resources are allocated.
5		→	RRC CONNECTION SETUP COMPLETE	UE shall indicate that it's capable of performing inter-frequency measurement for FDD mode.
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall enter CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that cell 2 be monitored. SS waits for 8 seconds.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 2's CPICH Ec/No value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS changes the physical channel allocation to common channel configuration.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12				SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected.
13				SS changes SYSTEM INFORMATION BLOCK TYPE 12 message to request that cell 2 be included in neighbour cell list for inter-frequency measurements.
14				SS increases the transmission power of cell 2 by 20 dBm, and then wait for a [x] seconds to allow the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall detect that cell 2 has become the best cell and then perform cell re-selection procedure.
16		←	CELL UPDATE CONFIRM	SS acknowledges the cell 2 is updated.

Notes:

The value [x] seconds is TBD, after the cell re-selection duration is determined from TS 25.304.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	2
- k_UTRA	Not Present
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	Not Present
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE Internal measurement system information	Not Present

PAGING TYPE 1

Information Element	Value/Remarks
Paging Record List	
- Paging Record	CN Originator
- CHOICE Paging originator	Terminating PS Data Call
- Paging cause	CS Domain
- CN domain identity	IMSI (DS-41)
- CHOICE UE Identity	Set to the same value as in USIM card
- IMSI (DS-41)	Not Present
BCCH modification info	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Transition to CELL_DCH"

RRC CONNECTION SETUP COMPLETE

Information Element	Value/Remarks
<u>START List</u>	
- <u>CN Domain Identity</u>	<u>Check to see if it is present for all supported CN domains</u>
- <u>START</u>	<u>Check to see if it is present for all supported CN domains</u>
~~Hyperframe Number~~	~~Not checked.~~
UE Radio access capability	Not checked.
- Conformance test compliance	Checked to see if set to 'R99'
- PDCP capability	Not checked.
- RLC capability	Not checked.
- Transport channel capability	Not checked.
- RF capability	Not checked.
- Physical channel capability	Not checked.
- UE multi-mode/multi-RAT capability	Not checked.
- Security capability	Not checked.
- LCS capability	Not checked.
- Measurement capability	Not checked.
- FDD measurements DL	Checked to see if set to 'TRUE'
- TDD measurements DL	Not checked.
- GSM measurements DL	Not checked.
- GSM 900 DL	Not checked.
- DCS 1800 DL	Not checked.
- GSM 1900 DL	Not checked.
- Multi-carrier measurement DL	Not checked.
- FDD measurements UL	Not checked.
- TDD measurements UL	Checked to see if set to 'TRUE'
- GSM measurements UL	Not checked.
- GSM 900 UL	Not checked.
- DCS 1800 UL	Not checked.
- GSM 1900 UL	Not checked.
- Multi-carrier measurement UL	Not checked.
UE system specific capability	Not checked.

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- Scrambling code change	2.0
- Downlink frame type	1.0
- DeltaSIR	
- DeltaSIRAfter	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/Remark
Measurement Identity Number	15
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 2
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 15
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 2
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 2
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “(Packet to CELL_FACH from CELL_DCH in PS”.

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in RRC CONNECTION SETUP message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
<u>Hyper frame number</u>	Check to see if it is present
Cell update cause	Check to see if it is set to “Cell Reselection”
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the same message sub-type found in Clause 8.1 of TS34.108.

8.4.1.6.5 Test Requirement

After step 4 the UE shall transmit RRC CONNECTION SETUP COMPLETE message with the IE “Measurement capability”, indicating that both uplink and downlink inter-frequency measurements for FDD mode are supported.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 2’s CPICH Ec/No value.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages which contain inter-frequency measured results for cell 2’s CPICH Ec/No value.

After step 14 the UE shall transmit CELL UPDATE message to inform that a cell reselection to cell 2 has occurred.

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
Hyper frame number	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type	
Integrity check info	Not checked.
Uplink integrity protection activation info	Not checked.
Hyper frame number	Not checked
Radio bearer uplink ciphering activation time info	Value should not be present unless otherwise stated.
	Not checked.
RB with PDCP information list	
- RB with PDCP information	

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
<u>Hyper frame number</u>	~~Should be~~ Value is checked to see ~~as if the value it is the~~ ~~currently used value~~ equals to "maximum value in the ~~currently used HFNs among CS and PS domains~~ " + 1
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

3GPP/TSG T1/SIG Meeting#12
Naantali, Finland, 28-30 August 2000

Document **T1S000156**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
34.123-1 CR 004		Current Version: 3.0.0	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: T#9 list expected approval meeting # here ↑		for approval X for information	
		strategic non-strategic (for SMG use only)	

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME

X

 UTRAN / Radio Core Network
(at least one should be marked with an X)

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Updates to RLC parameters

Work item:

Category: (only one category shall be marked with an X)	F Correction A Corresponds to a correction in an earlier release B Addition of feature C Functional modification of feature D Editorial modification	X	Release: Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00	X

Reason for change:

2 RLC parameters were revised according to CR-404r1 for TS25.331V3.2.0:

- "Poll_Window" IE is set to 99%, since 100% cannot be achieved in practice
- "Receiving Window Size" IE is added into "RLC info" IE

Clauses affected:

Annex A

Other specs affected:	Other 3G core specifications Other GSM core specifications MS test specifications BSS test specifications O&M specifications	X	→ List of CRs: → List of CRs: → List of CRs: TS34.108CR → List of CRs: → List of CRs:

Other comments:



<----- double-click here for help and instructions on how to create a CR.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- TFCI combining indicator	Not Present
- Secondary CCPCH info	TRUE
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TFCI existence	FALSE
- Fixed or Flexible Position	TRUE
- Timing offset	Flexible
- TFCS	0
- Normal	(This IE is repeated for TFC number for PCH and FACH.)
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	

- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- FACH/PCH information	
- TFS	(PCH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	(FACH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- References to system information blocks	Not Present
- Scheduling information	
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links	No code change A 2.0 1.0 None Not Present Not Present Not Present
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	

- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2

- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	

- Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	

- Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long
Downlink information common for all radio links	0 (0 to 16777215)
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position	Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible

- TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions

- MAX_DAT	4
- Transmission window size	8
- <u>Receiving window size</u>	<u>8</u>
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~1000~~ 1000
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	

- Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c	Not Present

- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	2
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	0 (single)
- DPC mode	Reference to TS34.108 clause 6.10 Parameter Set
- Spreading factor	Flexible
- Fixed or Flexible Position	TRUE
- TFCI existence	

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions

- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	10099
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	

- Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0
	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	3
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62

- TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	(Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions

- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	10099
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	

- Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0
	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	3
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62

- TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	(Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1

RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present

-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	100
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used

- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1

RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(DTCH TM)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(DTCH TM)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present

- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>Receiving window size</u>	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0

- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
DRAC static information	
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm

Uplink DPCH info -Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set Not Present
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2 No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used

- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Receiving window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	

- Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - <u>Receiving window size</u> - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - <u>Receiving window size</u> - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH information	3
Deleted DL TrCH information - Transport channel identity	4
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size -Scrambling code type -Scrambling code number -Number of DPDCH -spreading factor -TFCI existence -Number of FBI bits -Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from•CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Receiving window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	

- Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - <u>Receiving window size</u> - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - <u>Receiving window size</u> - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (AM DTCH) 4 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - <u>Receiving window size</u> - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	4 (TM CCCH for RRC) 5 Not Present
- Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 4 6 6 1 FACH 3 1 TRUE
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1

RB information to reconfigure	(UM CCCH for RRC)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to reconfigure	(TM BCCH for RRC)
- RB identity	7
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	

- Spreading factor - Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from•CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Receiving window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	

- Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - <u>Receiving window size</u> - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - <u>Receiving window size</u> - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Receiving window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	4
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	3
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1

RB information to reconfigure	(UM CCCH for RRC)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to reconfigure	(TM BCCH for RRC)
- RB identity	7
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	

- Spreading factor - Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62

- TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	(Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Deleted DL TrCH Information	4
- Transport channel identity	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
Downlink information common for all radio links	8slot
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	
	Not Present
	Not Present
	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present Not Preaent
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	Not Present
- CTFC information - CTFC	

- Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	0.00 Not Present
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN	Reference to TS34.108 clause 6.10 Parameter Set 33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256

- TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.)
Deleted DL TrCH Information	
- Transport channel identity	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Deleted DL TrCH Information	4
- Transport channel identity	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (single)
- Downlink DPCH power control information	Reference to TS34.108 clause 6.10 Parameter Set
- DPC mode	N/A
- Spreading factor	FALSE
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	0
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCS Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	
- Transport channel identity	2
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information	Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	3 (AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 5
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 (TM CCCH for RRC)
RB information to be affected	5
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 1
RB information to be affected	(UM CCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 (TM BCCH for RRC)
RB information to be affected	7
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6 (TM PCCH for RRC)
RB information to be affected	8
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 PCH
RB information to be affected	2
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS - Normal - TFCS Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature - Signature - Signature	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 4 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm 0 1

- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100

- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- <u>Receiving window size</u>	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200

- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	

- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted UL TrCH information	0
Added or Reconfigured UL TrCH information	0dB
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
Added or Reconfigured UL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number)
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH information	0
Added or Reconfigured DL TrCH information	0
	0dB
	Not Present

- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1

- UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- <u>Receiving window size</u>	<u>8</u>
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- <u>Receiving window size</u>	<u>8</u>
- Timer_RST	500
- Max_RST	4
- Polling info	

- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	

- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	

- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	3
Added or Reconfigured UL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Reference to TS34.108 clause 6.10 Parameter Set
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Reference to TS34.108 clause 6.10 Parameter Set
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Reference to TS34.108 clause 6.10 Parameter Set
Deleted DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set

- CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is needed for 12.2 kbps and 10.2 kbps) 4 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information	

- DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE 4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200

- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4

- Polling info	200
- Timer_poll_prohibit	200
- Timer_poll	1
- Poll_SDU	TRUE
- Last transmission PU poll	TRUE
- Last retransmission PU poll	~~10099~~
- Poll_Windows	(AM RLC)
- Downlink RLC mode	TRUE
- In-sequence delivery	8
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTEC information	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
	Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.)
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Transport channel identity	0
- TFS	0
- Dynamic Transport format information	0dB
- Number of Transport blocks	Not Present
- Bit mode RLC size info	
- Transport block size	1
- Semi-static Transport Format information	(This IE is repeated for TFI number)
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGP SI - TGP S Status Flg - TGP M - TGP R C - TGP C F N - TGP S N - TGP L 1 - TGP L 2 - TGP D - TGP L 1 - TGP L 2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200

- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4

- Polling info	200
- Timer_poll_prohibit	200
- Timer_poll	1
- Poll_SDU	TRUE
- Last transmission PU poll	TRUE
- Last retransmission PU poll	~~10099~~
- Poll_Windows	(AM RLC)
- Downlink RLC mode	TRUE
- In-sequence delivery	8
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTEC information	Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.)
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0 0 0dB Not Present
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	33dBm
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPST - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Receiving window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~10099~~
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2

Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- <u>Receiving window size</u>	<u>8</u>
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~100~~ 99
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- <u>Receiving window size</u>	<u>8</u>
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	~~100~~ 99
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH

- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)
- RB identity	5
- CHOICE RLC info type	
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
Signalling RB information to setup	(UM CCCH for RRC)
- RB identity	6
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
Signalling RB information to setup	(TM BCCH for RRC)
- RB identity	7
- CHOICE RLC info type	
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
Signalling RB information to setup	(TM PCCH for RRC)
- RB identity	8
- CHOICE RLC info type	
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature - Signature - Signature - Signature - Signature - Signature - Signature	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm 0 1 2 3 4 5 6

- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present
- Primary CPICH info	
- Primary scrambling code	
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	

- DL Scrambling Code - Signalling Method - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SS DT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SS DT Indicator - Spreading factor - Code number - Pilot symbol existence - TF CI existence - Fixed or Flexible Position - Timing offset - TF CS - Normal - TF CI Field 1 information(Explicit TF CS Configuration) - Addition - TF CS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00 Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
 	0
- Gain factor information	0dB
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS	0dB
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
-Uplink DPCH power control info -DPCCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	33dBm
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	Not Present
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE
	Not Present
	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
	0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier	100 Not Present

- TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor •d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	(This IE is repeated for TFC number.)
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	150 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00157**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 005

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
(list expected approval meeting # here ↑)

for approval ☒
for information ☐

strategic ☐ (for SMG
non-strategic ☐ use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Updates and corrections to "RB Identity", "Transport Channel Identity" and "Logical Channel Identity" IEs

Work item:

Category:

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

*(only one category
shall be marked
with an X)*

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

- In CR-396r1 for TS 25.331 V3.2.0, it was proposed to assign RB#0 for CCCH. Consequently, the existing assignment of RB identities in clause 8 and Annex A are directly affected. This CR updates the "RB identity" values found in TS 34.123-1 in accordance to the approved RAN CR.
- In Annex A, 4 classes of RRC messages are affected by the adoption of CR-396r1: RADIO BEARER SETUP, RADIO BEARER RECONFIGURATION, RADIO BEARER RELEASE and RRC CONNECTION RE-ESTABLISHMENT. The "RB Identity" values for all RBs in these messages are re-assigned, starting from RB#0 for CCCH. Additional modifications are performed for message sub-types, which are used to trigger a state transition to CELL_FACH state from CELL_DCH or CELL_FACH states. The changes are listed below:
 - In the DL, the identity of the transport channel used to carry DTCH AM entity was wrongly set to 4. This is corrected to 3 instead.
 - In the DL, CCCH-UM should be mapped to FACH with transport channel identity = 1. This results in a correction to the "Logical Channel Identity" field for BCCH and CCCH.
 - Since the messages cause a transition to CELL_FACH, compressed mode parameters are not applicable and hence deleted.
- In 8.3.1.14, the RADIO BEARER RELEASE message used in step 4 was intended to cause a CELL_DCH to CELL_FACH transition. Therefore, the correct message to use should be the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

Clauses affected: 8.1.7, 8.3.1.14, Annex A

**Other specs
affected:**

Other 3G core specifications	☐	→ List of CRs:
Other GSM core specifications	☐	→ List of CRs:
MS test specifications	☒	→ List of CRs:
BSS test specifications	☐	→ List of CRs:
O&M specifications	☐	→ List of CRs:

CR-XXX to 34.108

**Other
comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.1.7 Security mode control

8.1.7.1 Definition

8.1.7.2 Conformance requirement

1. This procedure is used to trigger the start of ciphering or to commands the change of the cipher key, both for the signalling link and for a user plane connection. The ciphering is configured in both directions.
2. The SRNC transmits a SECURITY MODE CONTROL COMMAND to the UE, which indicates the uplink Activation Time when the ciphering shall start to be applied in uplink. The SRNC starts to decipher in the new ciphering configuration at the uplink Activation Time.
3. When the UE receives the SECURITY MODE CONTROL COMMAND, it starts ciphering transmission in the uplink in the new configuration at the uplink Activation Time. It transmits a SECURITY MODE CONTROL COMPLETE message, which includes a downlink Activation Time, and starts to receives in the new ciphering configuration at that Activation Time. When the SRNC receives the SECURITY MODE CONTROL COMPLETE, it starts ciphering transmission in the new configuration at the downlink Activation Time.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.7.3 Test purpose

To confirm that the UE correctly communicates to the SS using each ciphering functions after each Activation Time when the UE receives a SECURITY MODE CONTROL COMMAND which includes the uplink Activation Time and transmits a SECURITY MODE CONTROL COMPLETE which includes the downlink Activation Time.

8.1.7.4 Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_DCH

Test Procedure

The UE is in the RRC connected state on the DCCH. The SS transmits a SECURITY MODE CONTROL COMMAND message which includes the uplink Activation Time. Then the UE start to cipher in uplink after the Activation Time and transmits a SECURITY MODE CONTROL COMPLETE message which includes the downlink Activation Time. The UE starts to cipher in downlink after the Activation Time. Finally the UE correctly communicates using each ciphering functions.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on DCCCH
2		←	SECURITY MODE CONTROL COMMAND	IE "Ciphering Algorithm" is set to a spare value
3		→	SECURITY MODE FAILURE	IE "Failure Cause" should be set to "Protocol Error" and IE "Protocol Error Information" should be set to "Information element value not comprehended".
4		←	SECURITY MODE CONTROL COMMAND	See specific message contents. For uplink transmissions, new ciphering configuration should be active after 255 frames from current CFN. SS checks to see
5		→	SECURITY MODE CONTROL COMPLETE	After the downlink Activation Time the downlink ciphering function is active.. SS starts to
4				Both Ciphering functions is active so the communication is done correctly..

Specific Message Contents

SECURITY MODE COMMAND (Step 2)

Information Element	Value/remark
Ciphering algorithm	1 of the 15 spare values

SECURITY MODE COMMAND (Step 4)

Information Element	Value/remark
Ciphering mode command	Start
Ciphering algorithm	Standard UMTS Encryption Algorithm UEA1
Ciphering algorithm	
Activation time for DPCH	Current CFN-[current CFN mod 8 + 8]
Activation time	
Radio bearer downlink ciphering activation time info	
Radio bearer activation time	2 RBs
RB identity ₁	~~23~~
RLC sequence number ₁	Current downlink RLC Sequence Number for RB#3
RB identity ₂	~~34~~
RLC sequence number ₂	Current downlink RLC Sequence Number for RB#4

8.1.7.5 Test requirement

After step2 the UE shall transmit a SECURITY MODE FAILURE message to report protocol error detected in the earlier SECURITY MODE CONTROL COMMAND message. The UE shall be able to communicate normally with all data unciphered. After step 4 the UE shall RLC-acknowledge the receipt of the SECURITY MODE CONTROL COMMAND message using unciphered mode. The SECURITY MODE CONTROL COMPLETE message

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and

perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these case. When the UTRAN receives this message, it is able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause "RB Control" when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active, with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and been allocated dedicated physical resources. Next SS send RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the UE sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel be released. However, this message does not contain information about the target cell to select when transiting to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to "RB Control" on the CCCH carried by PRACH physical channel, specified in cell 2's system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE"PRACH Info" and "Secondary CCPCH Info". To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on CCCH of cell 2. IE"Cell update cause" should be set to "RB Control". IE"DRX Indicator" set to "No DRX".
6		←	CELL UPDATE CONFIRM	IE"PRACH Info" and IE"Secondary CCPCH Info" are included in this message.
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information for setup - RAB Info - RAB Identity - CN Domain Identity - RB Info to setup list - RB Info to setup - RB Identity - PDCP Info - RLC Info - RB Mapping Info	4 PS 45 Not Present. Use the same RLC configuration as in TS 34.108. Use the same RLC multiplexing scheme as in TS 34.108.

Information Element	Value/remark
RB to be affected list UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS addition information - CHOICE CTFC Size - CTFC Information - x bit CTFC - Gain factor information - Gain factor β_c - Gain factor β_d Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE RLC mode - Octet mode RLC size info type 1 - CHOICE Octet mode RLC size - Size part 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DL Transport Channel information common to all transport channels Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS Frequency info Maximum allow UL TX power CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present. Not Present – use default value, all TFCs are allowed. FDD Normal Addition Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel 2 Dedicated transport channels 1 Octet Mode RLC size info type 1 Size type 1 16 Use the same settings as in TS 34.108 Not Present. 2 Same as the TFS used in the uplink specified in this message. Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class. Not Present. Not Present. Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled "Packet to CELL_DCH ~~FACH~~" from CELL_DCH in PS" found in ~~Clause 8.1 of TS34.108~~ Annex A, with the following exceptions:

Information Element	Value/remark
RAB information to release list	45
- RB Identity	
RB information to be affected list	
- RB information to be affected	CCCH for RRC (TM)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- RLC logical channel mapping indicator	Not Present
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	5
- MAC logical channel priority	2
- Logical channel max loss	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL Transport channel identity	Not Present
- Logical channel identity	6
- RB information to be affected	DCCH for RRC (UM)
- RB identity	01
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- MAC logical channel priority	2
- Logical channel max loss	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL Transport channel identity	Not Present
- Logical channel identity	1
- RB information to be affected	DCCH for RRC (AM)
- RB identity	12
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- MAC logical channel priority	3
- Logical channel max loss	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL Transport channel identity	Not Present
- Logical channel identity	2
- RB information to be affected	DCCH for NAS_DT-AM High Priority
- RB identity	23
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- MAC logical channel priority	4
- Logical channel max loss	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL Transport channel identity	Not Present
- Logical channel identity	3

- RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - <u>UL Transport channel identity</u> - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	DCCH for NAS_DT-AM Low Priority <u>34</u>
- Number of RLC logical channels - Downlink transport channel type - <u>DL Transport channel identity</u> - Logical channel identity	1 RACH <u>1Not Present</u> 4 5 1 FACH 1 <u>4Not Present</u> 4
- RB information to be affected - <u>RB identity</u> - <u>RB mapping info</u> - <u>Information for each multiplexing option</u> - <u>Number of RLC logical channels</u> - <u>Downlink transport channel type</u> - <u>DL Transport channel identity</u> - <u>Logical channel identity</u>	<u>BCCH for RRC (TM)</u> <u>5</u>
- RB information to be affected - <u>RB identity</u> - <u>RB mapping info</u> - <u>Information for each multiplexing option</u> - <u>Number of RLC logical channels</u> - <u>Downlink transport channel type</u> - <u>DL Transport channel identity</u> - <u>Logical channel identity</u>	<u>1</u> <u>FACH</u> <u>Not Present</u> 5 <u>PCCH for RRC (TM)</u> 6
- RB information to be affected - <u>RB identity</u> - <u>RB mapping info</u> - <u>Information for each multiplexing option</u> - <u>Number of RLC logical channels</u> - <u>Downlink transport channel type</u> - <u>DL Transport channel identity</u> - <u>Logical channel identity</u>	<u>1</u> <u>FACH</u> <u>Not Present</u> 1
UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS	Not Present – use default value, all TFCs are allowed. FDD Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2. Not Present.
Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS	1 Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2.
DL Transport Channel information common to all transport channels - SCCPCH TFCS	Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2. Not Present.
- DL DCH TFCS	Not Present.
Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1 Use the same TFS as in IE “FACH TFS” found in system information block type 5 messages of cell 2. Not Present
- DCH Target Quality - Transparent Mode Signalling Info	Not Present Not Present
Frequency info	Not Present – use the existing frequency information
Maximum allow UL TX power	Not Present – use the allowable UL TX power as specified by the UE's RF power class.
CHOICE Channel requirement	Not Present.
Downlink information common for all radio links	Not Present.
Downlink information per radio link list	Not Present.

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'RB Control'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE"Cell Update Cause" shall be set to "RB Control".

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel broadcasted on the system information message in cell 2.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- TFCI combining indicator	Not Present
- Secondary CCPCH info	TRUE
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TFCI existence	FALSE
- Fixed or Flexible Position	TRUE
- Timing offset	Flexible
- TFCS	0
- Normal	(This IE is repeated for TFC number for PCH and FACH.)
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	

- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- FACH/PCH information	
- TFS	(PCH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	(FACH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- References to system information blocks	Not Present
- Scheduling information	
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

[illegible]

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- CTFC information	Not Present

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code	Primary CPICH may be used
- SSDT Indicator - Spreading factor	Not Present
	1
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 2 1 Not Present 1 DCH 2 1
RB information to be affected	(UM DCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~0~~ 1 1 DCH 1 1 1 1 DCH 1 1
RB information to be affected	(AM DCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~1~~ 2 1 DCH 1 2 2 1 DCH 1 2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~2~~ 3 1 DCH 1 3 3 1 DCH 1 3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~3~~ 4 1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00 Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info	Not Present

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	Max DAT retransmissions
- Transmission window size	4
	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	<u>01</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	<u>12</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	<u>23</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	<u>34</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	Max DAT retransmissions 4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	~~0~~ <u>1</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	~~1~~ <u>2</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	~~2~~ <u>3</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	~~3~~ <u>4</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	(AM DTCH for PS domain)
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	Max DAT retransmissions 4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	34
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	01
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	12
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	23
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	34
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	(TM CCCH <u>uplink</u> for RRC) ~~50~~ 1 RACH 1 5 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM CCCH for RRC) ~~60~~ 1 FACH 1 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) ~~76~~ 1 FACH 1 ~~65~~
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) ~~87~~ 1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	3
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 — TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	(AM DTCH for PS domain)
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	Max DAT retransmissions 4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	43
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	01
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	12
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	23
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	34
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	(TM CCCH <u>uplink</u> for RRC) ~~50~~ 1 RACH 1 5 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM CCCH for <u>downlink</u> RRC) ~~60~~ 1 FACH 1 ~~56~~
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) ~~76~~ 1 FACH 1 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) ~~87~~ 1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 — TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	<u>01</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~12~~ 1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~23~~ 1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~34~~ 1 DCH 1 4 4 1 DCH 1 4 (TM DTCH)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~45~~ 1 DCH 2 1 Not Present 1 DCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH information - Transport channel identity	Not Present

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info - DPCCH power offset	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB

- PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 100 Not Present Not Present Primary CPICH may be used Not Present

- DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	<u>01</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~12~~ 1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~23~~ 1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~34~~ 1 DCH 1 4 4 1 DCH 1 4 (DTCH TM)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~45~~ 1 DCH 2 1 Not Present 1 DCH 2 1 (DTCH TM)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	~~56~~ 1 DCH 3 1 Not Present 1 DCH 3 1 (This IE is needed for 12.2 kbps and 10.2 kbps)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity	~~67~~ 1 DCH 4 1

- MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present 1 DCH 4 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
Deleted UL TrCH information - Transport channel identity	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB

Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Primary CPICH may be used Not Present
- Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information	Not Present

- Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	Φ_1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	~~1~~ <u>2</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	~~2~~ <u>3</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	~~3~~ <u>4</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	~~4~~ <u>5</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	

-DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set - TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set - Not Present 0 (single) - Reference to TS34.108 clause 6.10 Parameter Set - Flexible - TRUE - Not Present 0 1 - inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code	- No code change - A 2.0 1.0 - None - Not Present - Not Present - Not Present 100 - Not Present - Not Present - Primary CPICH may be used - Not Present

- channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	$\neq 1$
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	$\neq 2$
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	
- Transport channel identity	3
Deleted DL TrCH information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	inactive FDD Measurement 62 $(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$ 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier	Not Present
- Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TECS	Not Present

- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH from □CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	<u>0</u> ₁
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	<u>1</u> ₂
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 ~~56~~
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) ~~76~~ Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 ~~65~~
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) ~~87~~ Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 PCH 2 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info	1
- TGPSI	inactive
- TGPS Status Flg	FDD Measurement
- TGMP	62
- TGPRC	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- TGCFN	8
- TGSN	10
- TGL1	5
- TGL2	15
- TGD	35
- TGPL1	35
- TGPL2	Mode 1
- RPP	Mode 1
- ITPRM	DL
- UL/DL Mode	F/2
- Downlink compressed mode method	F/2
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	

- Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	01
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	12
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 ~~56~~
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) ~~76~~ Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 ~~65~~
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) ~~87~~ Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 PCH 2 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info	1
- TGPSI	inactive
- TGPS Status Flg	FDD Measurement
- TGMP	62
- TGPRC	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- TGCFN	8
- TGSN	10
- TGL1	5
- TGL2	15
- TGD	35
- TGPL1	35
- TGPL2	Mode 1
- RPP	Mode 1
- ITPRM	DL
- UL/DL Mode	F/2
- Downlink compressed mode method	F/2
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	150
- Primary scrambling code	Not Present
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	0
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	<u>45</u>
RB information to be affected	(UM DCCH for RRC)
- RB identity	<u>01</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	<u>42</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	<u>23</u>

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) ~~34~~
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256

- TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
Configuration)	
- Addition	Not Present

- TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	<u>45</u>
RB information to release	
- RB identity	<u>56</u>
RB information to release	
- RB identity	<u>67</u>
RB information to be affected	(UM DCCH for RRC)
- RB identity	<u>01</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	<u>12</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	<u>23</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	~~34~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	inactive FDD Measurement 62 $(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$ 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier	Not Present
- Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TECS	Not Present

- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	~~45~~
RB information to be affected	(UM DCCH for RRC)
- RB identity	~~01~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	~~12~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	~~23~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) ~~34~~
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	Not Present
- CTFC information - CTFC - Gain factor information	

- Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	<u>45</u>
RB information to release	
- RB identity	<u>56</u>
RB information to release	
- RB identity	<u>67</u>
RB information to release	
- RB identity	<u>70</u>
~~RB information to release~~	
~~- RB identity~~	<u>8</u>
RB information to be affected	(UM DCCH for RRC)
- RB identity	<u>01</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	<u>12</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	<u>23</u>

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) ~~34~~
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
Deleted UL TrCH Information - Transport channel identity	1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Deleted DL TrCH Information	4
- Transport channel identity	1
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
Downlink information common for all radio links	8slot
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	~~45~~
RB information to be affected	(UM DCCH for RRC)
- RB identity	~~01~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	~~12~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	~~23~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH 1 3 (AM DCCH for NAS_DT Low priority) <u>34</u>
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH <u>uplink</u> for RRC) <u>50</u>
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH <u>downlink</u> for RRC) <u>60</u>
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 <u>56</u> (TM BCCH for RRC) <u>76</u>
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 <u>65</u> (TM PCCH for RRC) <u>87</u>
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH Information - Transport channel identity	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class Identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor β_c - Gain factor β_d	Not Preaent
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	0
- Addition - TFCS addition	0
information(Reconfiguration/Addtion information)	Not Present
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Not Present
	Not Present
	2
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 - TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier	Not Present
- Primary CPICH info - Primary scrambling code	
- PDSCH code mapping - Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information	Not Present

- Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	<u>45</u>
RB information to be affected	(UM DCCH for RRC)
- RB identity	<u>01</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	<u>12</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	<u>23</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to be affected	1
- RB identity	3
- RB mapping info	(AM DCCH for NAS_DT Low priority)
- Information for each multiplexing option	~~34~~
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH <u>uplink</u> for RRC)
- RB identity	~~50~~
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	5
- Logical channel identity	1
- MAC logical channel priority	(UM CCCH <u>downlink</u> for RRC)
RB information to be affected	~~60~~
- RB identity	
- RB mapping info	1
- Information for each multiplexing option	FACH
- Number of RLC logical channels	1
- Downlink transport channel type	~~56~~
- Transport channel identity	(TM BCCH for RRC)
- Logical channel identity	~~76~~
RB information to be affected	
- RB identity	1
- RB mapping info	FACH
- Information for each multiplexing option	1
- Number of RLC logical channels	~~65~~
- Downlink transport channel type	(TM PCCH for RRC)
- Transport channel identity	~~87~~
- Logical channel identity	
RB information to be affected	
- RB identity	1
- RB mapping info	PCH
- Information for each multiplexing option	2
- Number of RLC logical channels	1
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCS Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH Information - Transport channel identity	4
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info - Available Signature - Signature - Signature - Signature	0 1 2

- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	~~1~~
-TGPS Status Flg	~~inactive~~
- TGMP	~~FDD Measurement~~
- TGPRC	~~62~~
- TGCFN	~~(Current CFN + (256 - TTI/10msec)) mod 256~~
- TGSN	~~8~~
- TGL1	~~10~~
- TGL2	~~5~~
- TGD	~~15~~
- TGPL1	~~35~~
- TGPL2	~~35~~
- RPP	~~Mode 1~~
- ITPRM	~~Mode 1~~
- UL/DL Mode	~~DL~~
- Downlink compressed mode method	~~F/2~~
- Uplink compressed mode method	~~F/2~~
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	

- channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	θ_1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	θ_2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	~~23~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	~~34~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to

- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks	TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence - Number of FBI bit - Puncturing Limit	TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info	No code change A 2.0 1.0 None Not Present Not Present Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	θ_1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	$\pm_2$
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	~~23~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	~~34~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	56
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	67
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 Not Present 1 DCH 4 1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks	3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transmission time interval	4
- Type of channel coding	(This IE is repeated for TFI number)
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity	Reference to TS34.108 clause 6.10 Parameter Set
- Time duration before retry	Reference to TS34.108 clause 6.10 Parameter Set
- DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present

Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present (This IE is needed for 12.2 kbps and 10.2 kbps) 4 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Φ_1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Φ_2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	~~23~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	~~34~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2
Frequency info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

[illegible]

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Φ_1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Φ_2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	~~23~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	~~34~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	45
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2
Frequency info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	<u>0</u> <u>1</u>
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	<u>1</u> <u>2</u>
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	~~23~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	~~34~~
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	50 (TM RLC) TRUE 1 RACH 1 5 1 (UM CCCH for RRC)
Signalling RB information to setup - RB identity - CHOICE RLC info type - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	60 (UM RLC) Max DAT retransmissions 4 1 FACH 1 5 (TM BCCH for RRC)
Signalling RB information to setup - RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	76 (TM RLC) TRUE 1 FACH 1 6 (TM PCCH for RRC)
Signalling RB information to setup - RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	87 (TM RLC) TRUE 1 FACH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information	1 (This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number - Puncturing Limit	0 1 2 3 4 5 6 7 Reference to TS34.108 clause 6.10 Parameter Set 0 Reference to TS34.108 clause 6.10 Parameter Set

- Available Sub Channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present
- Primary CPICH info	
- Primary scrambling code	
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	
- DL Scrambling Code	
- Signalling Method	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	

- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SS DT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SS DT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH -spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor βc	
- Gain factor βd	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor βc	0dB
- Gain factor βd	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	2
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier	100 Not Present

- TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	150 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting#12
Naantali, Finland, 28-30 August 2000

Document T1S000158
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
34.123-1 CR 006		Current Version: 3.0.0	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: T#9 list expected approval meeting # here ↑		for approval X for information	
		strategic non-strategic (for SMG use only)	

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME

X

 UTRAN / Radio Core Network
(at least one should be marked with an X)

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Updates to transport channel parameters

Work item:

Category:	F Correction	Release:	Phase 2
(only one category shall be marked with an X)	A Corresponds to a correction in an earlier release		Release 96
	B Addition of feature		Release 97
	C Functional modification of feature X		Release 98
	D Editorial modification		Release 99 X

Reason for change:

“Added or Reconfigured DL TrCH information” and “DL Transport channel information common for all transport channel” IE were revised according to CR-360r1 for TS25.331V3.2.0. The default contents of the affected messages in Annex A are revised.

In clause 8.3.1.14, the absence of “DL TrCH information list” IE and “DL Transport channel information common for all transport channels” IE were not indicated in the specific message content part. These omissions were corrected.

Clauses affected:

8.3.1.14, Annex A

Other specs affected:	Other 3G core specifications	→ List of CRs:	CR-XXX to 34.108
	Other GSM core specifications	→ List of CRs:	
	MS test specifications X	→ List of CRs:	
	BSS test specifications	→ List of CRs:	
	O&M specifications	→ List of CRs:	

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these case. When the UTRAN receives this message, it is able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause "RB Control" when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active, with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and been allocated dedicated physical resources. Next SS send RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the UE sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel be released. However, this message does not contain information about the target cell to select when transiting to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to "RB Control" on the CCCH carried by PRACH physical channel, specified in cell 2's system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE "PRACH Info" and "Secondary CCPCH Info". To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on CCCH of cell 2. IE"Cell update cause" should be set to "RB Control". IE"DRX Indicator" set to "No DRX".
6		←	CELL UPDATE CONFIRM	IE"PRACH Info" and IE"Secondary CCPCH Info" are included in this message.
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information for setup - RAB Info - RAB Identity - CN Domain Identity - RB Info to setup list - RB Info to setup - RB Identity - PDCP Info - RLC Info - RB Mapping Info	4 PS 4 Not Present. Use the same RLC configuration as in TS 34.108. Use the same RLC multiplexing scheme as in TS 34.108. Not Present.
RB to be affected list UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS addition information - CHOICE CTFC Size - CTFC Information - x bit CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present – use default value, all TFCs are allowed. FDD Normal Addition Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel
Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE RLC mode - Octet mode RLC size info type 1 - CHOICE Octet mode RLC size - Size part 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 Dedicated transport channels 1 Octet Mode RLC size info type 1 Size type 1 16 Use the same settings as in TS 34.108
DL Transport Channel information common to all transport channels Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS	<u>Not Present</u> <u>Not Present</u> Not Present- 2 Same as the TFS used in the uplink specified in this message. Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class.
Frequency info Maximum allow UL TX power CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present. Not Present. Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled “Packet to CELL_DCH from CELL_DCH in PS” found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark

RAB information to release list	4
- RB Identity	
RB information to be affected list	DCCH for RRC (UM)
- RB information to be affected	0
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	1
- Logical channel identity	1
- RB information to be affected	DCCH for RRC (AM)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
- RB information to be affected	DCCH for NAS_DT-AM High Priority
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
- RB information to be affected	DCCH for NAS_DT-AM Low Priority
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
UL Transport Channel information common to all transport channels	
- TFC Subset	Not Present – use default value, all TFCs are allowed.
- CHOICE Mode	FDD
- UL DCH TFCS	Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2.
Deleted TrCH information list (uplink)	Not Present.
Added or Reconfigured TrCH information list	
- Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2.
DL Transport Channel information common to all transport channels	
- SCCPCH TFCS	Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2.
- DL DCH TFCS	Not Present.
Deleted TrCH information list (downlink)	<u>Not Present</u>
Added or Reconfigured TrCH information list	Not Present.
Added or Reconfigured DL TrCH information	

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'RB Control'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE"Cell Update Cause" shall be set to "RB Control".

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel broadcasted on the system information message in cell 2.

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	

- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information_(Explicit TFCS Configuration)	
- Addition	
- TFCS addition information (Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- CHOICE DL parameters	<u>Independent</u>
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Same As UL	
- Transport channel identity	2

- CHOICE DL parameters - TFS UL TrCH identity - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information	SameAsUL 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- SameAsUL - Transport channel identity - CHOICE DL parameters - UL TrCH identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1	1 <u>Independent</u> <u>1</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35

- TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Primary CPICH may be used Not Present
- Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information	Not Present

- Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information_(Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present

- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	<u>Independent</u> (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Added or Reconfigured DL TrCH information - <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information	

- DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links	No code change A 2.0 1.0 None Not Present
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Not Present 100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code	Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- SSDD Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information_(Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present

- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m - Added or Reconfigured DL TrCH information - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Added or Reconfigured DL TrCH information - Independent - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Maximum allowed UL TX power - Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit - Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor	<u>Independent</u> (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 1 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set

- Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	(TM CCCH for RRC) 5 1 RACH 1 5 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM CCCH for RRC) 6 1 FACH 1 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7 1 FACH 1 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) 8 1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information_(Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d <u>- CHOICE DL parameters</u> - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - <u>CHOICE DL parameters</u> - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information <u><u>Independent</u></u> - Transport channel identity - <u>CHOICE DL parameters</u> - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information <u><u>Independent</u></u> - Transport channel identity	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 <u>Independent</u> Not Present 1 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3

- CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	<u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information	
<u>Independent</u> - Transport channel identity	4
- CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	<u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub Channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number	0 1 2 3 4 5 6 7 Reference to TS34.108 clause 6.10 Parameter Set 0 Reference to TS34.108 clause 6.10 Parameter Set 0 1 2 3 4 5 6 7 8 9 10 11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	0 Not Present Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	(TM CCCH for RRC) 5 1 RACH 1 5 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM CCCH for RRC) 6 1 FACH 1 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7 1 FACH 1 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) 8 1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information	(This IE is repeated for TFC number.)
(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0
<u>- CHOICE DL parameters</u>	<u>Independent</u>
- DL DCH TFCS	Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - CHOICE DL parameters	1
- TFS	<u>Independent</u>
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>- Independent</u>	
- Transport channel identity	2
<u>- CHOICE DL parameters</u>	<u>Independent</u>
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>- Independent</u>	
- Transport channel identity	3

- CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	<u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information	
<u>Independent</u> - Transport channel identity	4
- CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	<u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number - Puncturing Limit - Available Sub Channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number	0 1 2 3 4 5 6 7 Reference to TS34.108 clause 6.10 Parameter Set 0 Reference to TS34.108 clause 6.10 Parameter Set 0 1 2 3 4 5 6 7 8 9 10 11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(TM DTCH)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d <u>- CHOICE DL parameters</u> - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information <u>SameAsUL</u> - Transport channel identity - CHOICE DL parameters - UL TrCH Identity <u>TFS</u> - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present <u>Independent</u> (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 <u>SameAsUL</u> <u>1</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm

- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(DTCH TM)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	(DTCH TM)
RB information to be affected	5
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	3
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	3
- Transport channel identity	1
- Logical channel identity	
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

- MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present 1 DCH 4 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB Not Present
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information_(Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	Independent (This IE is repeated for TFC number.)
- Gain factor information - Gain factor •c - Gain factor •d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0

- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
~~- SameAsUL~~	
- Transport channel identity	1
- CHOICE DL parameters	<u>SameAsUL</u>
- UL TrCH Identity	<u>1</u>
~~- TFS~~	
~~- Dynamic Transport format information~~	~~(This IE is repeated for TFI number)~~
~~- Number of Transport blocks~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~- Bit mode RLC size info~~	
~~- Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~- Semi-static Transport Format information~~	
~~- Transmission time interval~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~- Type of channel coding~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~- Coding Rate~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~- Rate matching attribute~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~- CRC size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Primary CPICH may be used Not Present
- Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	Not Present

- Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
DRAC static information	
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition information (Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- CHOICE DL parameters	<u>Independent</u>
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- <u>Independent</u>	1
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set

	33dBm
Maximum allowed UL TX power	
Uplink DPCH info	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1)
- Uplink DPCH power control info	SF is reference to TS34.108 clause 6.10 Parameter Set TRUE
- DPCCH Power offset	Not Present(0)
- PC Preamble	Reference to TS34.108 clause 6.10 Parameter Set Not Present
- Power Control Algorithm	
- TPC step size	
- Scrambling code type	
- Scrambling code number	
- Number of DPDCH	
- spreading factor	
- TFCI existence	
- Number of FBI bits	
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (single)
- Downlink DPCH power control information	Reference to TS34.108 clause 6.10 Parameter Set Flexible
- DPC mode	TRUE
- Spreading factor	Not Present
- Fixed or Flexible Position	0
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
	No code change
- Scrambling code change	A
- Downlink frame type	2.0
- DeltaSIR1	1.0
- DeltaSIrafter1	None
- TX Diversity mode	Not Present
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPICH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	
- Downlink DPCH info for each RL	Not Present

- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information_(Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d <u>- CHOICE DL parameters</u> - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present <u>Independent</u> (This IE is repeated for TFC number.)

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH information	3
- Transport channel identity	4
Deleted DL TrCH information	
- Transport channel identity	
Added or Reconfigured DL TrCH information	
~~Independent~~	1
- Transport channel identity - CHOICE DL parameters	<u>Independent</u>
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	2
- Transport channel identity - CHOICE DL parameters	<u>Independent</u>
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible

- TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from•CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity	FACH
- PDCP info	1
- RLC info	5
- Downlink RLC mode	(TM BCCH for RRC)
- In-sequence delivery	7
- RB mapping info	Not Present
- Information for each multiplexing option	TRUE
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	TRUE
- Downlink RLC mode	1
- In-sequence delivery	PCH
- RB mapping info	2
- Information for each multiplexing option	1
- Number of RLC logical channels	Not Present
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to be affected	
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addition information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.)
- CHOICE DL parameters	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- DL DCH TFCS	0
- Normal	0
- TFCI Field 1 information(Explicit TFCS Configuration)	<u>Independent</u>
- Addition - TFCS addition	Not Present
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured DL TrCH information	
<u>- Independent</u>	1
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>- Independent</u>	2
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	
- Transport channel identity	3
- CHOICE DL parameters	<u>Independent</u>
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	
- Transport channel identity	4
- CHOICE DL parameters	<u>Independent</u>
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10

- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
	1
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from •CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity	FACH
- PDCP info	1
- RLC info	5
- Downlink RLC mode	(TM BCCH for RRC)
- In-sequence delivery	7
- RB mapping info	Not Present
- Information for each multiplexing option	TRUE
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	TRUE
- Downlink RLC mode	1
- In-sequence delivery	PCH
- RB mapping info	2
- Information for each multiplexing option	1
- Number of RLC logical channels	Not Present
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to be affected	
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addition information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.)
- CHOICE DL parameters	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- DL DCH TFCS	0
- Normal	0
- TFCI Field 1 information(Explicit TFCS Configuration)	<u>Independent</u>
- Addition - TFCS addition	Not Present
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured DL TrCH information	
<u>- Independent</u>	1
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>- Independent</u>	2
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	
- Transport channel identity	3
- CHOICE DL parameters	<u>Independent</u>
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	
- Transport channel identity	4
- CHOICE DL parameters	<u>Independent</u>
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10

- Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- CHOICE DL parameters	<u>Independent</u>
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Deleted DL TrCH Information	2
- Transport channel identity	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information	
<u>Independent</u>	1
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (single)
- Downlink DPCH power control information	Reference to TS34.108 clause 6.10 Parameter Set
- DPC mode	N/A
- Spreading factor	FALSE
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	0
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal	Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- CHOICE DL parameters	<u>Independent</u>
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
~~SameAsUL~~	
- Transport channel identity	1
- CHOICE DL parameters	<u>Independent</u>
- UL TrCH Identity	<u>1</u>
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH Information - Transport channel identity Added or Reconfigured UL TrCH information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent Not Present
- CTFC information - CTFC	

- Gain factor information - Gain factor •c - Gain factor •d	
- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	<u>Independent</u> (This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
<u>Independent</u>	1
- Transport channel identity - CHOICE DL parameters	<u>Independent</u>
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement

- TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TFCS - Normal - TFCI Field 1 information(Explicit TFCS	Not Present

Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	<u>Independent</u> (This IE is repeated for TFC number.)
Deleted DL TrCH Information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Transport channel identity	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Added or Reconfigured DL TrCH information	4
- <u>Independent</u>	1
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCCCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	
- Transport channel identity	2
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 <u>Independent</u> Not Present Not Present 1 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 <u>Independent</u> (This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	
- Transport channel identity	3
- CHOICE DL parameters	<u>Independent</u>
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 <u>Independent</u> Not Present 4 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm

- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	

- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SS DT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SS DT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	
- Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1

- UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 Not Present 1 DCH 4 1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information	3 (This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Reference to TS34.108 clause 6.10 Parameter Set
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Reference to TS34.108 clause 6.10 Parameter Set
Deleted DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
~~SameAsUL~~	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - CHOICE DL parameters - UL TrCH Identity	Reference to TS34.108 clause 6.10 Parameter Set
~~TFS~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Dynamic Transport format information~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Number of Transport blocks~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Bit mode RLC size info~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Transport block size~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Semi-static Transport Format information~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Transmission time interval~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Type of channel coding~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Coding Rate~~	Reference to TS34.108 clause 6.10 Parameter Set
~~Rate matching attribute~~	Reference to TS34.108 clause 6.10 Parameter Set

- CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information	
~~SameAsUL~~	
- Transport channel identity	2
~~CHOICE DL parameters~~	~~SameAsUL~~
~~UL TrCH Identity~~	~~2~~
~~TFS~~	
~~Dynamic Transport format information~~	~~(This IE is repeated for TFI number)~~
~~Number of Transport blocks~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Bit mode RLC size info~~	
~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Semi-static Transport Format information~~	
~~Transmission time interval~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Type of channel coding~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Coding Rate~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Rate matching attribute~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~CRC size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Added or Reconfigured DL TrCH information	
~~SameAsUL~~	
- Transport channel identity	3
~~CHOICE DL parameters~~	~~SameAsUL~~
~~UL TrCH Identity~~	~~3~~
~~TFS~~	
~~Dynamic Transport format information~~	~~(This IE is repeated for TFI number)~~
~~Number of Transport blocks~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Bit mode RLC size info~~	
~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Semi-static Transport Format information~~	
~~Transmission time interval~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Type of channel coding~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Coding Rate~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Rate matching attribute~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~CRC size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Added or Reconfigured DL TrCH information	(This IE is needed for 12.2 kbps and 10.2 kbps)
~~SameAsUL~~	
- Transport channel identity	4
~~CHOICE DL parameters~~	~~SameAsUL~~
~~UL TrCH Identity~~	~~4~~
~~TFS~~	
~~Dynamic Transport format information~~	~~(This IE is repeated for TFI number)~~
~~Number of Transport blocks~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Bit mode RLC size info~~	
~~Transport block size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Semi-static Transport Format information~~	
~~Transmission time interval~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Type of channel coding~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Coding Rate~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~Rate matching attribute~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~CRC size~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type	-6dB 8slot Algorithm1 1dB Long

- Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE 4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information CPCH SET info	Not Present Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)

- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	0 -a Not Present Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m - Deleted DL TrCH information - Added or Reconfigured DL TrCH information - <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Added or Reconfigured DL TrCH information - <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Maximum allowed UL TX power - Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit - Downlink information common for all radio links - Downlink DPCH info common for all RL	<u>Independent</u> (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 2 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGP SI - TGP S Status Flg - TGP M - TGP R C - TGP C F N - TGP S N - TGP L 1 - TGP L 2 - TGP D - TGP L 1 - TGP L 2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m - Deleted DL TrCH information - Added or Reconfigured DL TrCH information - <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Added or Reconfigured DL TrCH information - <u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Maximum allowed UL TX power - Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit - Downlink information common for all radio links - Downlink DPCH info common for all RL	<u>Independent</u> (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 2 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity	5
- CHOICE RLC info type	
- RLC info	(TM RLC)
- Downlink RLC mode	TRUE
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	5
- Logical channel identity	1
- MAC logical channel priority	(UM CCCH for RRC)
Signalling RB information to setup	6
- RB identity	
- CHOICE RLC info type	
- RLC info	(UM RLC)
- Uplink RLC mode	
- Transmission RLC discard	Max DAT retransmissions
- SDU discard mode	4
- MAX_DAT	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	5
- Logical channel identity	(TM BCCH for RRC)
Signalling RB information to setup	7
- RB identity	
- CHOICE RLC info type	
- RLC info	(TM RLC)
- Downlink RLC mode	TRUE
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	1
- Transport channel identity	6
- Logical channel identity	(TM PCCH for RRC)
Signalling RB information to setup	8
- RB identity	
- CHOICE RLC info type	
- RLC info	(TM RLC)
- Downlink RLC mode	TRUE
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	FACH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 <u>Independent</u> Not Present
- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information	
<u>Independent</u> - Transport channel identity - CHOICE DL parameters - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 <u>Independent</u> (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
PRACH info - Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature	0 1 2 3 4 5 6 7

- Available SF - Scrambling code number - Puncturing Limit - Available Sub Channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number	Reference to TS34.108 clause 6.10 Parameter Set 0 Reference to TS34.108 clause 6.10 Parameter Set 0 1 2 3 4 5 6 7 8 9 10 11 Not Present
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - DL Scrambling Code	Not Present

- Signalling Method - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
<u>- CHOICE DL parameters</u>	<u>Independent</u>
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
~~SameAsUL~~	1
- Transport channel identity	<u>SameAsUL</u>
~~- CHOICE DL parameters~~	<u>1</u>
~~- UL TrCH Identity~~	
~~- TFS~~	(This IE is repeated for TFI number)
~~- Dynamic Transport format information~~	Reference to TS34.108 clause 6.10 Parameter Set
~~- Number of Transport blocks~~	
~~- Bit mode RLC size info~~	Reference to TS34.108 clause 6.10 Parameter Set
~~- Transport block size~~	
~~- Semi-static Transport Format information~~	Reference to TS34.108 clause 6.10 Parameter Set
~~- Transmission time interval~~	Reference to TS34.108 clause 6.10 Parameter Set
~~- Type of channel coding~~	Reference to TS34.108 clause 6.10 Parameter Set
~~- Coding Rate~~	Reference to TS34.108 clause 6.10 Parameter Set
~~- Rate matching attribute~~	Reference to TS34.108 clause 6.10 Parameter Set
~~- CRC size~~	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set

- Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- CHOICE DL parameters	
- DL DCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- SameAsUL	
- Transport channel identity	
- CHOICE DL parameters	
- UL TrCH Identity	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Bit mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- DCH quality target	
- BLER Quality value	
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	
Maximum allowed UL TX power	
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	
- PC Preamble	
- Power Control Algorithm	
- TPC step size	
- Scrambling code type	
- Scrambling code number	
- Number of DPDCH	
- spreading factor	
- TFCI existence	
- Number of FBI bit	
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
	Not Present
	Independent (This IE is repeated for TFC number.)
	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
	0
	0
	0dB
	1
	SameAsUL
	1
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible

- TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
<u>- CHOICE DL parameters</u>	<u>Independent</u>
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Added or Reconfigured DL TrCH information	0
<u>Independent</u>	0dB
- Transport channel identity	1
<u>- CHOICE DL parameters</u>	<u>Independent</u>
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
-spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- CHOICE DL parameters - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information)	Not Present
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Not Present
Added or Reconfigured DL TrCH information	Not Present
- ~~Independent~~ - Transport channel identity - CHOICE DL parameters	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	Not Present
- ~~Independent~~ - Transport channel identity - CHOICE DL parameters	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	Not Present

- Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00
- UARFCN uplink(Nu)	Not Present
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	33dBm
-Uplink DPCH power control info	
-DPCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	

- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	(This IE is repeated for TFC number.)
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC information	0
- CTFC	0
- Gain factor information	<u>Independent</u>
- Gain factor •c	Not Present
- Gain factor •d	
- CHOICE DL parameters	
- DL DCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
<u>Independent</u>	1
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>Independent</u>	2
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>Independent</u>	3
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	4
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement

- TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information		Not Present
		Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	(This IE is repeated for TFC number.)
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC information	0
- CTFC	0
- Gain factor information	<u>Independent</u>
- Gain factor •c	Not Present
- Gain factor •d	
- CHOICE DL parameters	
- DL DCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
<u>Independent</u>	1
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>Independent</u>	2
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
<u>Independent</u>	3
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
~~Independent~~	4
- Transport channel identity	<u>Independent</u>
- CHOICE DL parameters	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement

- TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	150 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information		Not Present
		Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00159**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 007

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Updates to "UE Radio Access Capability" IE

Work item:

Category:

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

(only one category
shall be marked
with an X)

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

CR-357r2 for TS 25.331 V3.2.0 recommended that the name of "Conformance test compliance" IE be changed to "ICS Version", in order to be compatible with the title of TS 34.123-2. This CR updates TS 34.123-1 V3.0.0 in accordance to this modification.

Clauses affected: 8.4.1.6, Annex A

Other specs affected:

- Other 3G core specifications ☐
Other GSM core specifications ☐
MS test specifications ☒
BSS test specifications ☐
O&M specifications ☐

- List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

CR-XXX to 34.108

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

When transiting from CELL_DCH state to CELL_FACH state, the UE shall terminate all reporting activities related to inter-frequency measurements. After reaching CELL_FACH state, the UE shall begin to monitor neighbouring cells listed in the IE “inter-frequency cell info” of the system information type 12 message.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.6.3 Test Purpose

To verify that UE ceases to transmit MEASUREMENT REPORT messages when moving from CELL_DCH state to CELL_FACH, even if it has detected that reporting criteria have been satisfied in CELL_FACH state. To verify that the UE extracts information for inter-frequency measurement from system information messages after reaching CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

SS: 2 cells – Cell 1 is active while cell 2 is inactive. Cell 2 is allocated a frequency which is 1 UARFCN away from cell 1 in both uplink and downlink directions. The applicable radio conditions for cell 1 and cell 2 are as follow:

	Cell 1	Cell 2
UARFCN (N_u and N_d)	Channel 1	Channel 2
CPICH RSCP	-75 dBm	-85 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm
S	15	5

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode. SS pages the UE with the establishment cause set to “Terminating PS Data Call”. The SYSTEM INFORMATION TYPE 12 message is modified so that no measurement tasks are to be performed by the UE. The UE shall respond to the paging by sending a RRC CONNECTION REQUEST message on the PRACH. Upon receiving this message, SS allocates dedicated DPDCH physical channels to the UE by transmitting RRC CONNECTION SETUP message. The UE shall reply by transmitting a RRC CONNECTION SETUP COMPLETE message. SS then checks the IE “Measurement Capability” of this message and verifies that the UE is capable of performing inter-frequency measurements under FDD mode. After the confirmation of the UE inter-frequency measurement ability, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, information related to the radio bearers and uplink/downlink radio resources remain unchanged as compared to the equivalent IEs found in RRC CONNECTION SETUP message. The only difference concerns IE “DPCH compressed mode info”, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS then send a MEASUREMENT CONTROL message to the UE, specifying that cell 2 be the measurement object for inter-frequency type measurement. The periodic reporting criterion is selected for this measurement. SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing measured result of cell 2’s reporting quantity (CPICH Ec/No). SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, requesting the UE to switch its uplink and downlink DPDCH to common

physical channels. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then moves to CELL_FACH state. SS waits for another 8 seconds to detect any possible uplink MEASUREMENT REPORT messages as a result of inter-frequency measurements. SS then increases the transmission power of cell 2 by 20 dBm. SS waits for [x] seconds to allow the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 2, specifying the cause as “cell re-selection”. SS replies with CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and camped onto cell 1. SYSTEM INFORMATION BLOCK TYPE 12 is redefined, disabling all measurement and reporting activities.
2		←	PAGING TYPE 1	SS pages UE with cause set to “incoming circuit-switched call”
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	Uplink and downlink DPDCH resources are allocated.
5		→	RRC CONNECTION SETUP COMPLETE	UE shall indicate that it's capable of performing inter-frequency measurement for FDD mode.
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall enter CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that cell 2 be monitored. SS waits for 8 seconds.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 2's CPICH Ec/No value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS changes the physical channel allocation to common channel configuration.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
12				SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected.
13				SS changes SYSTEM INFORMATION BLOCK TYPE 12 message to request that cell 2 be included in neighbour cell list for inter-frequency measurements.
14				SS increases the transmission power of cell 2 by 20 dBm, and then wait for a [x] seconds to allow the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall detect that cell 2 has become the best cell and then perform cell re-selection procedure.
16		←	CELL UPDATE CONFIRM	SS acknowledges the cell 2 is updated.

Notes:

The value [x] seconds is TBD, after the cell re-selection duration is determined from TS 25.304.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE Internal measurement system information	Not Present

PAGING TYPE 1

Information Element	Value/Remarks
Paging Record List	
- Paging Record	
- CHOICE Paging originator	CN Originator
- Paging cause	Terminating PS Data Call
- CN domain identity	CS Domain
- CHOICE UE Identity	IMSI (DS-41)
- IMSI (DS-41)	Set to the same value as in USIM card
BCCH modification info	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Transition to CELL_DCH”

RRC CONNECTION SETUP COMPLETE

Information Element	Value/Remarks
Hyperframe Number	Not checked.
UE Radio access capability	
- ~~Conformance test compliance~~ CS Version	Checked to see if set to 'R99'
- PDCP capability	Not checked.
- RLC capability	Not checked.
- Transport channel capability	Not checked.
- RF capability	Not checked.
- Physical channel capability	Not checked.
- UE multi-mode/multi-RAT capability	Not checked.
- Security capability	Not checked.
- LCS capability	Not checked.
- Measurement capability	
- FDD measurements DL	Checked to see if set to 'TRUE'
- TDD measurements DL	Not checked.
- GSM measurements DL	Not checked.
- GSM 900 DL	Not checked.
- DCS 1800 DL	Not checked.
- GSM 1900 DL	Not checked.
- Multi-carrier measurement DL	Not checked.
- FDD measurements UL	Checked to see if set to 'TRUE'
- TDD measurements UL	Not checked.
- GSM measurements UL	Not checked.
- GSM 900 UL	Not checked.
- DCS 1800 UL	Not checked.
- GSM 1900 UL	Not checked.
- Multi-carrier measurement UL	Not checked.
UE system specific capability	Not checked.

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “(Packet to CELL_DCH from CELL_DCH in PS”, with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- Scrambling code change	2.0
- Downlink frame type	1.0
- DeltaSIR	
- DeltaSIRAfter	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/Remark
Measurement Identity Number	15
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 2
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 15
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 2
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 2
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “(Packet to CELL_FACH from CELL_DCH in PS”.

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in RRC CONNECTION SETUP message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to “Cell Reselection”
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the same message sub-type found in Clause 8.1 of TS34.108.

8.4.1.6.5 Test Requirement

After step 4 the UE shall transmit RRC CONNECTION SETUP COMPLETE message with the IE “Measurement capability”, indicating that both uplink and downlink inter-frequency measurements for FDD mode are supported.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 2’s CPICH Ec/No value.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages which contain inter-frequency measured results for cell 2’s CPICH Ec/No value.

After step 14 the UE shall transmit CELL UPDATE message to inform that a cell reselection to cell 2 has occurred.

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability <u>Conformance test compliance</u> <u>ICS Version</u> - PDCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (e.g. PICS/PIXT statements in GSM) and the user settings Value will be checked. UE must include the classmark information for the supported system

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 008

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Updates to "RB Mapping Info" IE

Work item:

Category:

(only one category shall be marked with an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

☐
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☐

Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

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☐

Reason for change:

In CR-354 for TS 25.331 V3.2.0, it was explained that the identity of a RB mapped to a common transport channel (RACH and FACH) cannot be uniquely identified. This is due to functional split between MAC-d and MAC-c/sh at the Iur interface as defined by RAN3. As result, in the case of RB multiplexing onto a common transport channel, the channel identity need not be known to the UE. RAN2 therefore explicitly forbid the possibility to state that a RB will appear on a certain RACH/FACH in CR-354. This CR proposes the removal of "Transport channel" IE in "RB mapping info" IE when common transport channels are involved.

In CR 355r2 for TS 25.331 V3.2.0, several modifications were adopted by RAN#8. The relevant changes affect "RB mapping info" IE in TS 34.123-1 in the following ways:

1. "Logical channel max loss" IE is added.
2. "MAC logical channel priority" IE is made mandatory.
3. For uplink TM RLC, it's possible to use timer discard without explicit signalling. In all uplink RB using transparent mode, it's specified that "Transmission RLC Discard" IE is not present.

For some bi-directional RBs, uplink parameters are found to be missing. The necessary modifications are reflected in this CR.

Clauses affected: 8.3.1.14, Annex A

Other specs affected:

Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☒ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

CR-XXX to 34.108

**Other
comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these 2 cases. When the UTRAN receives this message, it is able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause “RB Control” when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active and suitable for camping, with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and ~~been~~was allocated dedicated physical resources. Next SS sends RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the UE sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel be released. However, this message does not contain information about the target cell to select when transiting to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to “RB Control” on the CCCH carried by PRACH physical channel, specified in cell 2’s system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE’s “PRACH Info” and “Secondary CCPCH Info”. To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH physical channel specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on the uplink CCCH of cell 2. IE "Cell update cause" should be set to "RB Control". ~~IE "DRX Indicator" set to "No DRX".~~
6		←	CELL UPDATE CONFIRM	IEs "PRACH Info" and IE "Secondary CCPCH Info" are included in this message.
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.4.9 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information for setup - RAB Info - RAB Identity - CN Domain Identity - RB Info to setup list - RB Info to setup - RB Identity - PDCP Info - RLC Info - RB Mapping Info	4 PS 4 Not Present. Use the same RLC configuration as in TS 34.108. Use the same RLC multiplexing scheme as in TS 34.108. Not Present.
RB to be affected list UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS addition information - CHOICE CTFC Size - CTFC Information - x bit CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present – use default value, all TFCs are allowed. FDD Normal Addition Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel
Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE RLC mode - Octet mode RLC size info type 1 - CHOICE Octet mode RLC size - Size part 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 Dedicated transport channels 1 Octet Mode RLC size info type 1 Size type 1 16 Use the same settings as in TS 34.108
DL Transport Channel information common to all transport channels Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present. 2 Same as the TFS used in the uplink specified in this message.
Frequency info Maximum allow UL TX power	Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class.
CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present. Not Present. Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled “Packet to CELL_DCH from CELL_DCH in PS” found in Clause 8.49 of TS 34.108, with the following exceptions:

Information Element	Value/remark

RAB information to release list	4
- RB Identity	
RB information to be affected list	DCCH for RRC (UM)
- RB information to be affected	0
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- ~~Transport channel identity~~	1
- Logical channel identity	2
- MAC logical channel priority	
- ~~Logical channel max loss~~	<u>Not Present – Use default</u>
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- ~~Transport channel identity~~	1
- Logical channel identity	1
- RB information to be affected	DCCH for RRC (AM)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- ~~Transport channel identity~~	1
- Logical channel identity	2
- MAC logical channel priority	3
- ~~Logical channel max loss~~	<u>Not Present – Use default</u>
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- ~~Transport channel identity~~	1
- Logical channel identity	2
- RB information to be affected	DCCH for NAS_DT-AM High Priority
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- ~~Transport channel identity~~	1
- Logical channel identity	3
- MAC logical channel priority	4
- ~~Logical channel max loss~~	<u>Not Present – Use default</u>
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- ~~Transport channel identity~~	1
- Logical channel identity	3
- RB information to be affected	DCCH for NAS_DT-AM Low Priority
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- ~~Transport channel identity~~	1
- Logical channel identity	4
- MAC logical channel priority	5
- ~~Logical channel max loss~~	<u>Not Present – Use default</u>
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
UL Transport Channel information common to all transport channels	
- TFC Subset	Not Present – use default value, all TFCs are allowed.
- CHOICE Mode	FDD
- UL DCH TFCS	Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2.
Deleted TrCH information list (uplink)	Not Present.
Added or Reconfigured TrCH information list	
- Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2.
DL Transport Channel information common to all transport channels	
- SCCPCH TFCS	Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2.

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'RB Control'
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Clause ~~8.4.9~~ of TS34.108.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE "Cell Update Cause" shall be set to "RB Control".

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel broadcasted on the system information message in cell 2.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- TFCI combining indicator	Not Present
- Secondary CCPCH info	TRUE
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TFCI existence	FALSE
- Fixed or Flexible Position	TRUE
- Timing offset	Flexible
- TFCS	0
- Normal	(This IE is repeated for TFC number for PCH and FACH.)
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	

- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- FACH/PCH information	
- TFS	(PCH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	(FACH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- References to system information blocks	Not Present
- Scheduling information	
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS		Not Present
- Normal		
- TFCI Field 1 information(Explicit TFCS Configuration)		
- Addition		
- TFCS addition		
information(Reconfiguration/Addtion information)		
- CTFC information		
- CTFC		
- Gain factor information		
- Gain factor β_c		
- Gain factor β_d		
- Power offset Pp-m		
- FACH/PCH information		Not Present
- TFS		
- Dynamic Transport format information		
- Number of Transport blocks		
- Octet mode RLC size info		
- Transport block size		
- Semi-static Transport Format information		
- Transmission time interval		
- Type of channel coding		
- Coding Rate		
- Rate matching attribute		
- CRC size		
- TFS		
- Dynamic Transport format information		
- Number of Transport blocks		
- Octet mode RLC size info		
- Transport block size		
- Semi-static Transport Format information		
- Transmission time interval		
- Type of channel coding		
- Coding Rate		
- Rate matching attribute		
- CRC size		
- References to system information blocks		Not Present
- Scheduling information		

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	Not Present

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- <u>Logical channel max loss</u>	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	TM RLC
- Transmission RLC discard	Not Present
- <u>CHOICE</u> Downlink RLC mode	(TM RLC)TM RLC
- In-sequence delivery	TRUE

- RB mapping info	1
- Information for each multiplexing option	DCH
- Number of RLC logical channels	2
- Uplink transport channel type	1
- Transport channel identity	Not Present
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108

- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information	clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)

- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPS	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- <u>Logical channel max loss</u>	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- CHOICE_Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	~~Not Present~~ 1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)

- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Logical channel max loss	3
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 0 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	0.00 Not Present
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL	

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPST - TGPST Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Logical channel max loss	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	Max DAT retransmissions

- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- CHOICE Downlink RLC mode	(AM RLC)AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3

RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	0
- Logical channel max loss	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	0.00 Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	33dBm
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set

- DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links	No code change A 2.0 1.0 None Not Present
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Not Present 100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code	Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Logical channel max loss	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	Max DAT retransmissions

- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- CHOICE Downlink RLC mode	(AM RLC)AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	6
- MAC logical channel priority	6
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~4~~
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
- MAC logical channel priority	2
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
- MAC logical channel priority	3
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3
- MAC logical channel priority	4
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3

RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
- MAC logical channel priority	5
~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	5
- MAC logical channel priority	1
~~Logical channel max loss~~	~~0~~
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
~~Transport channel identity~~	~~2~~
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

Added or Reconfigured DL TrCH information	3
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	4
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	

-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0

- TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Logical channel max loss	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	Max DAT retransmissions

- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- CHOICE Downlink RLC mode	(AM RLC)AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	6
- MAC logical channel priority	6
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~4~~
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
- MAC logical channel priority	2
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
- MAC logical channel priority	3
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3
- MAC logical channel priority	4
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3

RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
- MAC logical channel priority	5
~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	5
- MAC logical channel priority	1
~~Logical channel max loss~~	~~0~~
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
~~Transport channel identity~~	~~2~~
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

Added or Reconfigured DL TrCH information	3
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	4
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	

-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0

- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- <u>Logical channel max loss</u>	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- <u>Logical channel max loss</u>	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)

- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted UL TrCH information	
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information	
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information	
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set

- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 100 Not Present

- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- <u>Logical channel max loss</u>	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- <u>Logical channel max loss</u>	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(DTCH TM)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(DTCH TM)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	Not Present
Deleted DL TrCH information	
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size	Not Present Not Present

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- <u>Logical channel max loss</u>	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- <u>Logical channel max loss</u>	0
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 1 (AM DCCH for RRC)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	1 DCH 1 2 2 0 1
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 2
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	(AM DCCH for NAS_DT High priority) 2 1 DCH 1 3 3 0 1
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	(AM DCCH for NAS_DT Low priority) 3 1 DCH 1 4 4 0 1
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	(AM DTCH) 4 1 DCH 2 1 ~~Not Present~~ 1 0 1
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) information(Reconfiguration/Addition information) - CTFC information

- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Deleted DL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	
- Transparent mode signalling info	Not Present

- Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	
- MAX_DAT	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	

- Last retransmission PU poll - Poll_Windows - <u>CHOICE</u> Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	1 DCH 1 2 2 0 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity RB information to reconfigure - RB identity - PDCP info - RLC info - <u>CHOICE</u> Uplink RLC mode - Transmission RLC discard - <u>CHOICE</u> SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - <u>CHOICE</u> Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	1 DCH 1 3 3 0 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity RB information to reconfigure - RB identity - PDCP info - RLC info - <u>CHOICE</u> Uplink RLC mode - Transmission RLC discard - <u>CHOICE</u> SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll	1 DCH 1 3 3 0 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - <u>CHOICE</u> Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	1 DCH 1 4 4 0
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4
RB information to reconfigure	(AM DTCH)
- RB identity - PDCP info - RLC info - <u>CHOICE</u> Uplink RLC mode - Transmission RLC discard - <u>CHOICE</u> SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - <u>CHOICE</u> Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - <u>Logical channel max loss</u>	4 Not Present Not Present
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 2 1 ~~Not Present~~ 0
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 2 1
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	

- Logical channel max loss - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH information	
- Transport channel identity	3
Deleted DL TrCH information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor	0 (single) Reference to TS34.108 clause 6.10 Parameter Set

- Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- CHOICE Uplink RLC mode	
- Transmission RLC discard	
- CHOICE SDU discard mode	
- MAX_DAT	
- CHOICE Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- CHOICE Uplink RLC mode	
- Transmission RLC discard	
- CHOICE SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	

- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
- MAC logical channel priority	5
~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- <u>CHOICE</u> SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~4~~
- Logical channel identity	6
- MAC logical channel priority	6
~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~3~~
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	<u>TM RLC</u>
- Transmission RLC discard	<u>Not Present</u>
- <u>CHOICE</u> Downlink RLC mode	<u>Not Present</u>
~~In-sequence delivery~~	~~TRUE~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH

~~Transport channel identity~~ - Logical channel identity - MAC logical channel priority - Logical channel max loss	~~1~~ 5 1 0
RB information to reconfigure	(UM CCCH for RRC)
- RB identity - PDCP info - RLC info - CHOICE Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type	6 - Not Present - UM RLC - TRUE
~~Transport channel identity~~ - Logical channel identity	~~1~~ 5
RB information to reconfigure	(TM BCCH for RRC)
- RB identity - PDCP info - RLC info - CHOICE Uplink RLC mode - CHOICE Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type	7 - Not Present - Not Present - TM RLC - TRUE
~~Transport channel identity~~ - Logical channel identity	~~1~~ 6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity - PDCP info - RLC info - CHOICE Uplink RLC mode - CHOICE Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type	8 - Not Present - Not Present - TM RLC - TRUE
~~Transport channel identity~~ - Logical channel identity	~~1~~ 2
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Logical channel max loss - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) - Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	

- Gain factor β_d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information	Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9

- Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- CHOICE Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- CHOICE Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- CHOICE Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	

- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
- MAC logical channel priority	5
~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- <u>CHOICE</u> Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- <u>CHOICE</u> Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~4~~
- Logical channel identity	6
- MAC logical channel priority	6
~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~3~~
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	<u>TM RLC</u>
~~Transmission RLC Discard~~	~~Not Present~~
- <u>CHOICE</u> Downlink RLC mode	<u>TM RLC</u>
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH

~~Transport channel identity~~ - Logical channel identity - MAC logical channel priority - Logical channel max loss	~~1~~ 5 1 0
RB information to reconfigure	(UM CCCH for RRC)
- RB identity - PDCP info - RLC info - CHOICE Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type	6 - Not Present - UM RLC - TRUE
~~Transport channel identity~~ - Logical channel identity	~~1~~ 5
RB information to reconfigure	(TM BCCH for RRC)
- RB identity - PDCP info - RLC info - CHOICE Uplink RLC mode - CHOICE Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type	7 - Not Present - Not Present - TM RLC - TRUE
~~Transport channel identity~~ - Logical channel identity	~~1~~ 6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity - PDCP info - RLC info - CHOICE Uplink RLC mode - CHOICE Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type	8 - Not Present - Not Present - TM RLC - TRUE
~~Transport channel identity~~ - Logical channel identity	~~1~~ 2
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Logical channel max loss - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) - Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	

- Gain factor β_d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information	Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9

- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSiRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	150
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used

- Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2

RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	0
- Logical channel max loss	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	0
- Logical channel max loss	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Deleted UL TrCH Information	2
- Transport channel identity	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1

-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TECS	Not Present

- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	

- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC	
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH Information	0
- Transport channel identity	0
Deleted DL TrCH Information	0dB
- Transport channel identity	2
Deleted DL TrCH Information	3
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCSI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCSI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3

- MAC logical channel priority - Logical channel max loss - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	3 0 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Logical channel max loss	1 DCH 1 4 4 0 1 DCH 1 4
- Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	0 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
- Transport channel identity	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00 Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2

RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	0
- Logical channel max loss	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	0
- Logical channel max loss	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH Information	
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	

Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Deleted DL TrCH Information - Transport channel identity Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 3 4 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
- MAC logical channel priority	2
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
- MAC logical channel priority	3
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3

- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	4
- MAC logical channel priority	5
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	5
- MAC logical channel priority	1
- Logical channel max loss	0
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
~~- Transport channel identity~~	~~2~~
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	

Deleted UL TrCH Information	2
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	
- DL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	2
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62

- TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	(Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
- MAC logical channel priority	2
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
- MAC logical channel priority	3
~~- Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3

- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	4
- MAC logical channel priority	5
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	5
- MAC logical channel priority	1
- Logical channel max loss	0
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~- Transport channel identity~~	~~1~~
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
~~- Transport channel identity~~	~~2~~
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	

Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
CPCH set ID	Not Present
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	
- DL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH Information	4
- Transport channel identity	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Bit mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- DCH quality target	
- BLER Quality value	
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm

[illegible]

CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	100
- Primary scrambling code	Not Present
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
	FALSE
- Pilot symbol existence	TRUE
- TFCI existence	Flexible
- Fixed or Flexible Position	0
- Timing offset	Not Present
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present

- Scheduling information	

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(UM RLC)~~ UM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>CHOICE</u> Downlink RLC mode	~~(UM RLC)~~ UM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- <u>Logical channel max loss</u>	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200

- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- <u>Logical channel max loss</u>	<u>0</u>
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	TM RLC
- <u>Transmission RLC Discard</u>	<u>Not Present</u>
- <u>CHOICE</u> Downlink RLC mode	~~(TM RLC)~~ TM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- <u>Logical channel max loss</u>	<u>0</u>
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- <u>Logical channel max loss</u>	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)

- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0

- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info	No code change A 2.0 1.0 None Not Present Not Present Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(UM RLC)~~ UM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>CHOICE</u> Downlink RLC mode	~~(UM RLC)~~ UM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- <u>Logical channel max loss</u>	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- <u>Logical channel max loss</u>	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- <u>Logical channel max loss</u>	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	

- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- CHOICE Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	TM RLC
- Transmission RLC Discard	Not Present
- CHOICE Downlink RLC mode	~~(TM RLC)~~ TM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	TM RLC
- Transmission RLC Discard	Not Present
- CHOICE Downlink RLC mode	~~(TM RLC)~~ TM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)

- RB identity	6
- PDCP info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	TM RLC
- Transmission RLC Discard	Not Present
- CHOICE Downlink RLC mode	~~(TM RLC)~~ TM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	4
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Logical channel max loss	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	3
Added or Reconfigured UL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Reference to TS34.108 clause 6.10 Parameter Set
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Reference to TS34.108 clause 6.10 Parameter Set
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	Reference to TS34.108 clause 6.10 Parameter Set
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is needed for 12.2 kbps and 10.2 kbps) 4 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size	-6dB 8slot Algorithm1 1dB

- Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE 4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter

- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(UM RLC)~~ UM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>CHOICE</u> Downlink RLC mode	~~(UM RLC)~~ UM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200

- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- <u>Logical channel max loss</u>	<u>0</u>
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- <u>Logical channel max loss</u>	<u>0</u>
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4

- Polling info	200
- Timer_poll_prohibit	200
- Timer_poll	1
- Poll_SDU	TRUE
- Last transmission PU poll	TRUE
- Last retransmission PU poll	100
- Poll_Windows	~~(AM RLC)~~ AM RLC
- CHOICE Downlink RLC mode	TRUE
- In-sequence delivery	8
- Receiving window size	
- Downlink RLC status info	200
- Timer_status_prohibit	200
- Timer_EPC	TRUE
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- CHOICE Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present

- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Logical channel max loss - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH information	0
Added or Reconfigured DL TrCH information	0dB
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0.00
Added or Reconfigured DL TrCH information	Not Present
Frequency info	2
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	33dBm
Uplink DPCH info	-6dB
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	8slot
Uplink DPCH info	Algorithm1
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	1dB
Uplink DPCH info	Long
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	0 (0 to 16777215)
Uplink DPCH info	Not Present(1)
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	SF is reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	TRUE
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	Not Present(0)

- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation	 Not Present Not Present

- Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(UM RLC)~~ UM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>CHOICE</u> Downlink RLC mode	~~(UM RLC)~~ UM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200

- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- <u>Logical channel max loss</u>	<u>0</u>
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- <u>Logical channel max loss</u>	<u>0</u>
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4

- Polling info	200
- Timer_poll_prohibit	200
- Timer_poll	1
- Poll_SDU	TRUE
- Last transmission PU poll	TRUE
- Last retransmission PU poll	100
- Poll_Windows	~~(AM RLC)~~ AM RLC
- CHOICE Downlink RLC mode	TRUE
- In-sequence delivery	8
- Receiving window size	
- Downlink RLC status info	200
- Timer_status_prohibit	200
- Timer_EPC	TRUE
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- CHOICE Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present

- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Logical channel max loss - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH information	0
Added or Reconfigured DL TrCH information	0dB
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0.00
Added or Reconfigured DL TrCH information	Not Present
Frequency info	2
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	33dBm
Uplink DPCH info	-6dB
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	8slot
Uplink DPCH info	Algorithm1
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	1dB
Uplink DPCH info	Long
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	0 (0 to 16777215)
Uplink DPCH info	Not Present(1)
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	SF is reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	TRUE
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	Not Present(0)

- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation	 Not Present Not Present

- Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- ~~CHOICE~~ Uplink RLC mode	~~(UM RLC)~~ UM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- ~~CHOICE~~ Downlink RLC mode	~~(UM RLC)~~ UM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- ~~Transport channel identity~~	~~1~~
- Logical channel identity	1
- MAC logical channel priority	2
- ~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- ~~Transport channel identity~~	~~1~~
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- ~~CHOICE~~ Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- ~~CHOICE~~ Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- ~~Transport channel identity~~	~~1~~
- Logical channel identity	2
- MAC logical channel priority	3
- ~~Logical channel max loss~~	~~0~~
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- ~~Transport channel identity~~	~~1~~

- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	3
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- <u>CHOICE</u> Uplink RLC mode	~~(AM RLC)~~ AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- <u>CHOICE</u> Downlink RLC mode	~~(AM RLC)~~ AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
- MAC logical channel priority	5
- Logical channel max loss	0
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)
- RB identity	5
- CHOICE RLC info type	
- RLC info	
~~CHOICE Uplink RLC mode~~	~~TM RLC~~
- Transmission RLC Discard	Not Present
- CHOICE Downlink RLC mode	~~(TM RLC)~~ Not Present
~~In-sequence delivery~~	~~TRUE~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	5
- MAC logical channel priority	1
- Logical channel max loss	0
Signalling RB information to setup	(UM CCCH for RRC)
- RB identity	6
- CHOICE RLC info type	
- RLC info	
~~CHOICE Uplink RLC mode~~	~~(UM RLC)~~ UM RLC
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	Max DAT retransmissions
- RB mapping info	4
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	5
Signalling RB information to setup	(TM BCCH for RRC)
- RB identity	7
- CHOICE RLC info type	
- RLC info	
~~CHOICE Uplink RLC mode~~	~~Not Present~~
- CHOICE Downlink RLC mode	~~(TM RLC)~~ TM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~1~~
- Logical channel identity	6
Signalling RB information to setup	(TM PCCH for RRC)
- RB identity	8
- CHOICE RLC info type	
- RLC info	
~~CHOICE Uplink RLC mode~~	~~Not Present~~
- CHOICE Downlink RLC mode	~~(TM RLC)~~ TM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
~~Transport channel identity~~	~~2~~
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1
DL Transport channel information common for all transport channel	(This IE is repeated for TFI number)
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Reference to TS34.108 clause 6.10 Parameter Set
- Gain factor information - Gain factor β_c - Gain factor β_d	Reference to TS34.108 clause 6.10 Parameter Set
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0
Frequency info	Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	
Maximum allowed UL TX power	
PRACH info	
- Available Signature - Signature - Signature	1
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	0
	1

- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present
- Primary CPICH info	
- Primary scrambling code	
- PDSCH with SHO DCH info	
- DSCH radio link identifier	

- TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - DL Scrambling Code - Signalling Method - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS	0dB
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH -spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	0.00
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	Not Present
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE
	Not Present
	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor βc	
- Gain factor βd	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor βc	0dB
- Gain factor βd	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	2
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier	100 Not Present

- TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	150 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00161**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 009

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐ (for SMG
non-strategic ☐ use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <http://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Updates to paging cause values and paging-related parameters

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

1. "Paging cause" in PAGING TYPE 1 messages and "establishment cause" in RRC CONNECTION REQUEST messages were modified according to CR-353r3. The affected RRC test cases were revised to use the new cause values.
2. PAGING TYPE 1 messages were changed to allow UEs supporting GSM-MAP CN types as well as ANSI-41 CN types.
3. For clause 8.3.1.15 "Cell Update: Acknowledged Mode RLC Reset", several modifications were made on the test procedure. The objective of the test case is to check that the UE is able to detect an unrecoverable RLC AM error, executes the RLC reset using cell update procedure and then resumes normal operations on the affected SRB (in this case SRB for RRC AM) after the reset. Previously, the test case requires the UE to transmit UPLINK DIRECT TRANSFER message (sent using the SRB for NAS AM). However, receiving such a message does not confirm that the RRC AM SRB is successfully re-initialized. New test steps were written to address this flaw.
4. The "paging cause" IE PAGING TYPE 2 message in Annex A is also updated.
5. The values for "CN Domain DRX cycle length" IE and "UTRAN DRX cycle length coefficient" IE in SIB messages are revised according to CR-313r2.

Other changes are carried out:

4. For clauses 8.1.1.4, 8.1.1.5 and 8.1.1.6, SYSTEM INFORMATION TYPE 1 messages are added into relevant test steps. This is done to enable these test cases to be applicable to that UEs supporting GSM-MAP or ANSI-MAP CN types.
5. SYSTEM INFORMATION TYPE 13 messages are modified to cater to both CS-only and PS-only UEs.
6. Editorial mistakes were corrected.

Clauses affected: 8.1.1.X, 8.1.4.6, 8.1.4.9, 8.1.4.10, 8.3.1.10, 8.3.1.15, 8.4.1.2, 8.4.1.3, 8.4.1.6,

Annex A.

**Other specs
affected:**

Other 3G core specifications	☐	→ List of CRs:	CR-XXX to 34.108
Other GSM core specifications	☐	→ List of CRs:	
MS test specifications	☒	→ List of CRs:	
BSS test specifications	☐	→ List of CRs:	
O&M specifications	☐	→ List of CRs:	

**Other
comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

8. Layer 3

8 Radio Resource Control RRC

8.1 RRC Connection Management Procedure

8.1.1 Paging

8.1.1.1 _____Paging for Connection in idle mode

8.1.1.1.1 Definition

8.1.1.1.2 Conformance requirement

In idle mode, UE monitors the paging occasions determined using parameters from SYSTEM INFORMATION BLOCK messages. When the UE receives a PAGING TYPE 1 message transmitted on PCCH during one of its assigned paging occasions, it should attempt to establish an RRC connection.

Reference

3GPP TS 25.331 clause 8.1.2, 3GPP TS 25.211 clause 5.3.3.7, 3GPP TS 25.304 clause 8.

8.1.1.1.3 Test purpose

To confirm that the UE establishes an RRC connection after it receives a PAGING TYPE1 message which includes IE "Paging Record"(UE identity) set to the IMSI of the UE.

8.1.1.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :Idle state with a CN UE identity (set to IMSI).

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched CN UE identity for the UE in the idle state. The UE shall not change its state. The SS transmits a PAGING TYPE1 message, which includes a matched CN UE identity for the UE in the idle state. During transmission of PAGING TYPE 1 messages, SS selects the correct paging indicator on the PICH in order to allow the UE to respond to paging. Then the UE transmits an RRC CONNECTION REQUEST to the SS, the SS transmits an RRC CONNECTION SETUP to the UE. When the UE receives this message, the UE establishes an RRC connection.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See specific message contents.
2		←	PAGING TYPE1	The SS transmits the message, which includes an unmatched identity (incorrect IMSI), then the UE does not change its state.
3		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI).
4		→	RRC CONNECTION REQUEST	SS checks the following IEs: ~~“Initial UE identity” must be the same as test-SIM IMSI.~~ ~~“Establishment Cause” must “Terminating Call”~~ ~~“Protocol Indicator” must be FALSE~~
5		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish an RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE13

Information Element	Value/remark
CN domain system information list	Only 1 entry
CN domain system information	
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE CN Type	Supported CN type
- CN domain specific NAS system information	Default
- CN domain specific DRX cycle length coefficient	26
UE Timers and constants in idle mode	
- T300	5 sec.
- N300	3
- T312	10 sec
- N312	200

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call ~~whose kind is with one of the supported services (Conversational Call, Streaming Call, Interactive Call, Background Call, SMS)speech,CS Data,PS data,SMS,Unspecified)~~
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to an arbitrary octet string of length 7 bytes which is different from the IMSI value stored in the USIM card.

PAGING TYPE 1 (Step 3)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call ~~whose kind is with one of the supported services (speech,CS Data,PS data,SMS,Unspecified)Conversational Call, Streaming Call, Interactive Call, Background Call, SMS)~~
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card

RRC CONNECTION REQUEST (Step 4)

Information Element	Value/remark
<u>Initial UE identity</u>	<u>Same as the IMSI stored in the USIM card, or the registered TMSI or P-TMSI</u>
<u>Establishment Cause</u>	<u>Check to see if it is set to the same value as "Paging Cause" IE in the PAGING TYPE 1 message transmitted on step 3.</u>
<u>Protocol Error Indicator</u>	<u>Check to see if it is set to FALSE</u>
<u>Measured results on RACH</u>	<u>Not checked.</u>

8.1.1.1.5 Test requirement

After step 2 the UE shall not transmit on the uplink CCCH in order to establish a RRC connection.

After step 5 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.1.2 _____ Paging for Connection in connected mode (CELL_PCH)

8.1.1.2.1 Definition

8.1.1.2.2 Conformance requirement

In CELL_PCH state, a UE can respond to a paging request from UTRAN. In this case, the UTRAN has requested to establish a connection with the UE. The UE should then attempt to perform a cell update procedure and move to CELL_FACH state in order to respond to the paging using uplink CCCH.

Reference

3GPP TS 25.331 clause 8.1.2

8.1.1.2.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE1 message which indicates that the paging has originated from UTRAN. To verify that the UE performs cell update procedure after entering the CELL_FACH state.

8.1.1.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :CELL_PCH state with a valid U-RNTI already assigned by the SS

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched U-RNTI in CELL_PCH state . The UE does not change its state. Then SS transmits a PAGING TYPE 1 message with a matched identifier but originates from the CN instead of UTRAN. The UE should not change state after receiving this message. The SS transmits a PAGING TYPE1 message, which includes a matched U-RNTI in the connected state. Then the UE enters the CELL_FACH state and performs the cell updating procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See specific message contents
2		←	PAGING TYPE1	The SS transmits a message including an unmatched identifier. UE shall not respond to the paging.
3		←	PAGING TYPE1	The SS transmits a message includes a matched identifier but with the originator being the CN, UE shall not respond to the paging.
4		←	PAGING TYPE 1	The SS transmits the message with the UTRAN being the originator and including the UE's assigned U-RNTI
5		→	CELL UPDATE	The UE enters the CELL_FACH state. UE performs cell updating procedure. The CELL UPDATE message shall contain the value "Cell Update Cause" set to "paging response".

Specific Message Contents

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to an arbitrary 16-bit string which is different from the SRNC identity assigned.
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.

PAGING TYPE 1 (Step 3)

Same as the PAGING TYPE 1 message as in Clause 8.1.1.1.4, with the exception that the "BCCH modification info" IE should be omitted in the message.

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	CN originator
- U-RNTI	
- SRNC Identity	Set to the same SRNC identity as previously assigned.
- S-RNTI	Set to the same S-RNTI as previously assigned.

SYSTEM INFORMATION BLOCK TYPE 12

Same as the SYSTEM INFORMATION BLCOK TYPE 13 message used in Clause 8.1.1.1.3.

8.1.1.2.5 Test requirement

After step 2 the UE shall not ~~change its state~~ respond to the PAGING TYPE 1 message sent in step 2.

After step 3 the UE shall not ~~change its state~~ respond to the PAGING TYPE 1 message sent in step 3.

After step 4 the UE shall enter the CELL FACH state and send a CELL UPDATE message with "Cell Update Cause" IE set to "paging response".

8.1.1.3 mode(URA_PCH) Paging for Connection in connected

8.1.1.3.1 Definition

8.1.1.3.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 1 message from the network to selected UEs in URA_PCH state using the paging control channel (PCCH). The UE listens to it and then enters the CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.1.2

8.1.1.3.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE1 message which includes IE "Paging Record"(U-RNTI) for the UE and which is set to "CN" in IE"paging originator".

8.1.1.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :URA_PCH state with a valid U-RNTI assigned by the SS

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched U-RNTI in URA_PCH state. The UE does not change its current state. The SS transmits a PAGING TYPE1 message which includes a matched U-RNTI in the connected state. Then the UE listens to it and enters the CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE1	The SS transmits the message <u>that</u> includes an unmatched identifier, then the UE does not change its state.
2		←	PAGING TYPE1	The SS transmits the message <u>that</u> includes a matched identifier.
3		→	CELL UPDATE	The UE enters the CELL_FACH state.

Specific Message Contents

PAGING TYPE 1 (Step 1)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	Set to an unused SRNC identity which is different from the SRNC identity assigned.
- SRNC Identity	
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to the previously assigned SRNC identity
- S-RNTI	Set to previously assigned S-RNTI

8.1.1.3.5 Test requirement

After step 1 the UE shall not respond to the paging ~~change its state~~.

After step 2 the UE shall enter the CELL FACH state, and transmit CELL UPDATE message to initiate the cell updating procedure with the paging cause set to “paging response”.

8.1.1.4 _____ Paging for Notification in idle mode

8.1.1.4.1 Definition

8.1.1.4.2 Conformance requirement

When a system information blocks on the BCCH is modified, the ~~message~~ PAGING TYPE 1 message can be sent on the PCCH to inform the UE about the changes which ~~is are~~ currently ~~operating taking place~~ in the idle mode. The PAGING TYPE 1 message includes the IE "BCCH Modification Information". Upon receiving this notification from the UTRAN, the UE shall read the relevant MIB and/or SIB(s) subsequently during idle mode.

Reference

3GPP TS 25.331 clause 8.1.1.2

8.1.1.4.3 Test purpose

To confirm that the UE checks the included new value tag of the master information block and read the SYSTEM INFORMATION₁ after it receives a PAGING TYPE1 message which includes the IE "BCCH Modification Information".

8.1.1.4.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : Idle state with a CN UE identity .

Test Procedure

The UE is in the idle state before SS starts changing SYSTEM INFORMATION BLOCK TYPE 1 or TYPE 13 message, depending on the CN type supported by the UE. The SS transmits a PAGING TYPE1 message on the paging occasions assigned to the UE. The message shall include the IE "BCCH Modification Information" indicating the starting time when the BCCH system information is modified. Simultaneously, SS continuously send MASTER INFORMATION BLOCK with the "MIB Value Tag" changed. The modified SYSTEM INFORMATION BLOCK TYPE 1 or TYPE 13 message shall be transmitted continuously too. The IE "DRX Cycle Length Coefficient" is altered with respect to the original IE. The SS shall wait until the stated starting time and then transmit the PAGING TYPE 1 message. The message shall address the UE using its IMSI and set the "paging cause" IE ~~set to~~ a compatible "terminating call" type that is supported by the UE. The UE shall react to the PAGING TYPE 1 message and send a RRC_CONNECTION_REQUEST message to SS.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 1 or SYSTEM INFORMATION BLOCK TYPE 13	SS transmits information on BCCH in order for UE to listen to one of the S-CCPCH physical channel, which carries PAGING TYPE 1 messages on PCCH. Relevant paging parameters are also broadcasted.
2		←	PAGING TYPE 1	SS transmits the message includes the IE "BCCH Modification Information", with the "Value Tag" changed from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to 4094 radio frame from the current SFN.
3		←	MASTER INFORMATION BLOCK	SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting.
		←	SYSTEM INFORMATION BLOCK TYPE 1 or SYSTEM INFORMATION BLOCK TYPE 13	At the same time, SS starts to transmit the affected modified message continuously. The value of IE "DRx Cycle Length Coefficient" is changed in this message.
4		←	PAGING TYPE 1	SS transmits this message continuously on the PCCH according to the new value of "DRx Cycle Length Coefficient".
5				SS starts to monitor the uplink RACH after approximately 4096 radio frames from step 2.
6		→	RRC CONNECTION REQUEST	UE transmits a request due to answer to the PAGING TYPE 1 received in step 5. The IE "Establishment Cause" should be set to "Terminating Call" supported by the UE and the "Initial UE Identity" set to UE's IMSI.
7		←	RRC CONNECTION REJECT	UE shall return to idle mode after receiving this message

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1 (Step 1) – for UEs supporting GSM-MAP core networks

Information Element	Value/remark
References to other system information blocks	Not Present
CN common GSM-MAP NAS system information	Location Area Information (LAI)
CN domain system information list	Supports both CS and PS domains
- CN domain system information	
- CN domain identity	CS domain
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	Set to the same octet string as in IE"CN common GSM MAP-NAS system information"
- CN domain specific DRX cycle length coefficient	12
- CN domain system information	
- CN domain identity	PS domain
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	Set to the same octet string as in IE"CN common GSM MAP-NAS system information"
- CN domain specific DRX cycle length coefficient	12
UE Timers and constants in idle mode	
- T300	Default
- N300	Default
- T312	Default
- N312	Default
UE Timers and constants in connected mode	Not Present

SYSTEM INFORMATION BLOCK TYPE 13 (Step 1) – for UEs supporting ANSI-41 core networks

Information Element	Value/remark
References to other system information blocks	Not Present
CN domain system information list	Only 1 entry Supports both CS and PS domains
CN domain system information	
- CN domain identity	Default CS
- CHOICE CN Type	Supported CN type ANSI-41
- CN domain specific NAS system information	
- ANSI-41 NAS System Information	
- ANSI-41 NAS Parameter	Default Set to an ANSI-41 user zone information
- CN domain specific DRX cycle length coefficient	12
- CN domain identity	PS
- CHOICE CN Type	ANSI-41
- CN domain specific NAS system information	
- ANSI-41 NAS System Information	
- ANSI-41 NAS Parameter	Set to an ANSI-41 user zone information
- CN domain specific DRX cycle length coefficient	12
UE Timers and constants in idle mode	
- T300	Default
- N300	Default
- T312	Default
- N312	Default
UE Capability update requirement	Not Present

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Arbitrarily selected SRNC identity which is different from current identity
- S-RNTI Identity	Arbitrarily selected S-RNTI identity which is different from current identity
BCCH modification info	
MIB Value Tag	
BCCH Modification time	2
	4094

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 1 (Step 3) – for UEs supporting GSM-MAP core networks

<u>Information Element</u>	<u>Value/remark</u>
<u>References to other system information blocks</u>	<u>Not Present</u>
<u>CN common GSM-MAP NAS system information</u>	<u>Location Area Information (LAI)</u>
<u>CN domain system information list</u>	<u>Supports both CS and PS domains</u>
- <u>CN domain system information</u>	<u>CS domain</u>
- <u>CN domain identity</u>	<u>GSM-MAP</u>
- <u>CHOICE CN Type</u>	<u>Set to the same octet string as in IE"CN common GSM</u>
- <u>CN domain specific NAS system information</u>	<u>MAP-NAS system information"</u>
- <u>CN domain specific DRX cycle length coefficient</u>	<u>6</u>
- <u>CN domain system information</u>	<u>PS domain</u>
- <u>CN domain identity</u>	<u>GSM-MAP</u>
- <u>CHOICE CN Type</u>	<u>Set to the same octet string as in IE"CN common GSM</u>
- <u>CN domain specific NAS system information</u>	<u>MAP-NAS system information"</u>
- <u>CN domain specific DRX cycle length coefficient</u>	<u>6</u>
<u>UE Timers and constants in idle mode</u>	<u>Default</u>
- <u>T300</u>	<u>Default</u>
- <u>N300</u>	<u>Default</u>
- <u>T312</u>	<u>Default</u>
- <u>N312</u>	<u>Default</u>
<u>UE Timers and constants in connected mode</u>	<u>Not Present</u>

SYSTEM INFORMATION BLOCK TYPE 13 (Step 3) – for UEs supporting ANSI-41 core networks

<u>Information Element</u>	<u>Value/remark</u>
<u>References to other system information blocks</u>	<u>Not Present</u>
<u>CN domain system information list</u>	<u>Only 1 entry Supports both CS and PS domains</u>
<u>CN domain system information</u>	<u>Default</u>
- <u>CN domain identity</u>	<u>CS domain</u>
- <u>CHOICE CN Type</u>	<u>Supported CN type</u>
- <u>CN domain specific NAS system information</u>	<u>ANSI-41</u>
- <u>ANSI-41 NAS system information</u>	<u>Default</u>
- <u>ANSI-41 NAS Parameter</u>	<u>Set to an ANSI-41 user zone information</u>
- <u>CN domain specific DRX cycle length coefficient</u>	<u>46</u>
- <u>CN domain identity</u>	<u>PS domain</u>
- <u>CHOICE CN Type</u>	<u>ANSI-41</u>
- <u>CN domain specific NAS system information</u>	
- <u>ANSI-41 NAS system information</u>	
- <u>ANSI-41 NAS Parameter</u>	<u>Set to an ANSI-41 user zone information</u>
- <u>CN domain specific DRX cycle length coefficient</u>	<u>6</u>
<u>UE Timers and constants in idle mode</u>	
- <u>T300</u>	<u>Default</u>
- <u>N300</u>	<u>Default</u>
- <u>T312</u>	<u>Default</u>
- <u>N312</u>	<u>Default</u>

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	CN originator
- Paging Cause	Terminating Call whose kind is with one of the supported service (Conversational Call, Streaming Call, Interactive Call, Background Call, SMS) Terminating Speech Call
- CN Domain Identity	CS Domain
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI value stored in the USIM card

RRC CONNECTION REJECT (Step 7)

Information Element	Value/remark
Initial UE identity	
- CHOICE UE id type	IMSI
- IMSI	Set to the same octet string as in the IMSI value stored in the USIM card
Rejection cause	Unspecified
Wait time	0
Redirection info	Not Present

8.1.1.4.5 Test requirement

After step 6 the UE shall transmit RRC CONNECTION REQUEST message in response to the PAGING TYPE 1 message.

8.1.1.5 _____ Paging for Notification in connected mode
(CELL_PCH)

8.1.1.5.1 Definition

8.1.1.5.2 Conformance requirement

When a system information block on the BCCH is modified, the message PAGING TYPE1 can be sent on the PCCH to inform the UE about this change in the CELL_PCH state. ~~The This message shall include the IE "BCCH Modification Information".~~ Upon receiving this notification from the UTRAN, the UE shall read the relevant MIB and/or SIB(s) subsequently while in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.1.1.5.2

8.1.1.5.3 Test purpose

To confirm that the UE enters the CELL_FACH state, checks the ~~included~~ new value tag of the master information block, and read the SYSTEM INFORMATION messages after it receives a PAGING TYPE1 message which includes the IE "BCCH Modification Information";

8.1.1.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_PCH state with a valid U-RNTI assigned to it.

Test Procedure

Test steps 1 to 5 under Clause 8.1.1.4 can be applied to this test. However, the PAGING TYPE 1 messages used in step 2 and step 4 need to be altered. The changes are indicated in the specific message content paragraph under this clause. At step 6, UE shall send the CELL UPDATE message indicating the “cell update cause” to be “paging response”. SS then replies with a CELL UPDATE CONFIRM message to allow the UE to transit to CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	<u>SYSTEM INFORMATION BLOCK TYPE 1</u> or SYSTEM INFORMATION BLOCK TYPE 13	SS transmits information on BCCH in order for UE to listen to one of the S-CCPCH physical channel, which carries PAGING TYPE 1 messages on PCCH. Relevant paging parameters are also broadcasted.
2		←	PAGING TYPE 1	SS transmits the paging message which comprises IE “BCCH Modification Information”, with the “Value Tag” changed from the “MIB Value Tag” of the current Master Information Block. Also the modification time is set to 4094 radio frame from the current SFN.
3		←	MASTER INFORMATION BLOCK	SS starts to transmit the MIB with the “MIB Value Tag” IE different from the original setting.
		←	<u>SYSTEM INFORMATION BLOCK TYPE 1</u> or SYSTEM INFORMATION BLOCK TYPE 13	At the same time, SS starts to transmit the affected modified message continuously. The value of IE “DRx Cycle Length Coefficient” is changed in this message.
4		←	PAGING TYPE 1	SS transmits this message continuously on the PCCH according to the new value of “DRx Cycle Length Coefficient”. This message shall page the UE with its U-RNTI and setting the UTRAN as the paging originator.
5				SS starts to monitor the uplink RACH after approximately 4096 radio frames from step 2.
6		→	CELL_UPDATE	The IE “Cell Update Cause” should be set to “Paging Response” and the IE “U-RNTI” shall be similar to the UE’s U-RNTI value. The “Protocol Error Indicator” IE shall be set to FALSE.
7		←	CELL_UPDATE CONFIRM	UE shall transit to CELL_FACH state after receiving this message.

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1 or TYPE 13 (Step 1)

The content of this message is the same in the message used in step 1 specified in Clause 8.1.1.4.3.

PAGING TYPE 1 (Step 2)

8.1.1.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : URA_PCH state with a valid U-RNTIassigned.

Test Procedure

The UE is in the URA_PCH state before the SS starts changing SYSTEM INFORMATION BLOCK messages. SS modifies its SYSTEM INFORMATION and updates the “value tag” of both the SYSTEM INFORMATION BLOCK and of the MASTER INFORMATION BLOCK. After a while, the SS transmits a PAGING TYPE 1 message, which includes the IE” BCCH Modification Information”. The UE enters the CELL_FACH state and reads the modified SYSTEM INFORMATION BLOCK. The UE shall act according to the modified message. In this testcase, the UE shall adjust it paging occasions and read the new PCCH blocks newly assigned to it under DRX mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION	The SS changes the SYSTEM INFORMATION when the UE is in the connected state (URA_PCH).
2		←	PAGING TYPE 1	SS transmits the message includes the IE”BCCH Modification Information”.
3				The UE enters the CELL_FACH state and reads the SYSTEM INFORMATION and then the UE follows this message.

Specific Message Contents

None

8.1.1.6.5 Test requirement

After step 2 the UE shall enter the CELL_FACH state and read the SYSTEM INFORMATION message and follow it.

8.1.1.7 _____ Paging for Connection in connected mode
(CELL_DCH)

8.1.1.7.1 Definition

8.1.1.7.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 2 message from the network to selected UEs in CELL_DCH state using the dedicated control channel(DCCH). The UE listens to it and responds to this message accordingly.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.1.7.3 Test purpose

To confirm that the UE responds this message after it receives a PAGING TYPE2 message which includes IE ”Paging Record Type Identifier” for the UE.

8.1.1.7.4 Method of test

Initial Condition

System Simulator : 1 cell.

UE : CELL_DCH state, but neither a valid TMSI nor P-TMSI is assigned to the UE

Test Procedure

The SS transmits a PAGING TYPE 2 message which includes a unmatched Paging Record Type Identifier in CELL_DCH state. The UE shall not respond to this message. SS pages the UE again, this time with a matched Paging Record Type Identifier but with the IE"paging cause" set to one of the spare values. UE shall respond by transmitting a RRC STATUS message on the DCCH using RLC-AM mode. Finally, SS transmits a PAGING TYPE 2 message, which includes a matched Paging Record Type Identifier. Then the UE shall responds to this message by the transmission of an upper layer message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE 2	The SS transmits the message includes an unmatched identifier, then the UE does not respond.
2		←	PAGING TYPE 2	The SS transmits the message includes a matched identifier.
3	↔		RRC STATUS	The UE shall respond by reporting the protocol error to the SS.
4		←	PAGING TYPE 2	The UE shall respond to the paging message in step 2.
5				The UE shall respond to the paging message in step 2.

Specific Message Contents

PAGING TYPE 2 (Step 1)

Information Element	Value/remark
Paging cause	Terminating Call supported by the UE
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	~~Unsupported~~ Set to "TMSI" or "P-TMSI"

PAGING TYPE 2 (Step 2)

Information Element	Value/remark
Paging cause	Use one of the 3-spare values
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	~~Supported IMSI~~ Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.

RRC STATUS (Step 3)

Information Element	Value/remark
Protocol error information	Checked to see if set to "Information element value not comprehended"

PAGING TYPE 2 (Step 4)

Information Element	Values/Remarks
Paging cause	Terminating Call supported by the UE
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	~~Supported IMSI~~ Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.

8.1.1.7.5 Test requirement

After step 1 the UE shall not respond to the paging message on the DCCH.

8.1.1.8.5 Test requirement

After step 1 the UE shall not respond.

After step 2 the UE shall respond.

8.1.4.6 RRC Connection Re-Establishment: Failure(T315=0,T314=0)

8.1.4.6.1 Definition

8.1.4.6.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. However the UE must enter to idle mode when T314 is set to 0 in RADIO BEARER SETUP message and also T315 is set to 0 in SYSTEM INFORMATION message.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.6.3 Test purpose

To confirm that the UE enters to idle mode, after detecting that a radio link failure has occurred.

8.1.4.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state after making an successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving on the radio link except PCCPCH, the UE should detect a radio link failure . Then the UE shall enter to idle mode as both T314 and T315 are set to 0. The SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is in idle state., the UE transmits an RRC CONNECTION REQUEST message on the uplink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T314=0
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state, after making a successful outgoing call.
4				The SS stops transmitting and receiving on the radio link except the PCCPCH.
5				The UE should enter to idle mode after it detects the radio link failure and SS confirms that the UE does not transmit any RRC CONNECTION RE-ESTABLISHMENT REQUEST messages for 20 seconds.
6		←	PAGING TYPE1	SS resumes transmission and reception on radio links suspended in step 4. SS pages the UE using a matched identity (test-SIM IMSI).
7		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause" – must "Terminating Call" "Protocol Indicator" – must be FALSE
8		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	20 seconds
T315	0 seconds
N313	50

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information to setup - RAB info - T314	0

PAGING TYPE 1

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call ~~whose kind is with one of the~~ supported services (<u>Conversational Call, Streaming</u> <u>Call, Interactive Call, Background Call, SMS</u> ~~speech, CS~~ ~~Data, PS data, SMS, Unspecified~~)
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card

8.1.4.6.5 Test requirement

After step 4 the UE shall not transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step 8 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.4.9 RRC Connection Re-Establishment: Failure(T314 is timeout and T315=0)

8.1.4.9.1 Definition

8.1.4.9.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. When the UE shall not find a new cell until T314 is timeout The UE must enter to idle mode .

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.9.3 Test purpose

To confirm that the UE enters to idle mode, after T314 is timeout.

8.1.4.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state after a successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving on the radio link except PCCPCH, the UE should detect a radio link failure . Until T314 is timeout the UE shall continue to find a new cell and SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is not in idle state by no response before T314 is timeout After T314 is timeout then the UE shall enter to idle mode The SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is in idle state., the UE transmits an RRC CONNECTION REQUEST message on the uplink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T314=20 seconds
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state, after making a successful outgoing call.
4				The SS stops transmitting and receiving on the radio link except •for the PCCPCH.
5		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test- SIM IMSI) before T314 is timeout.
6				The SS confirms that the UE does not transmit a response for 20 seconds.
7		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test- SIM IMSI).
8		→	RRC CONNECTION REQUEST	SS checks the following IEs : “Initial UE identity” – must be the same as test-SIM IMSI. “Establishment Cause – must “Terminating Call” “Protocol Indicator” – must be FALSE
9		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	20 seconds
T315	0 seconds
N313	50

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Re-establishment timer - T314	20 seconds

PAGING TYPE 1

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call whose kind is with one of the supported services (Conversational Call, Streaming Call, Interactive Call, Background Call, SMS) ~~speech, CS Data, PS data, SMS, Unspecified~~
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card

8.1.4.9.5 Test requirement

After step 5 the UE shall not transmits an RRC CONNECTION REQUEST message.

After step 9 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.4.10 RRC Connection Re-Establishment: Failure(T315 is timeout and T314=0)

8.1.4.10.1 Definition

8.1.4.10.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. When the UE shall not find a new cell until T315 is timeout The UE must enter to idle mode .

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.10.3 Test purpose

To confirm that the UE enters to idle mode, after T315 is timeout.

8.1.4.10.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state after a successful outgoing call attempt. After the call has been established, the SS stops transmitting and receiving on the radio link except PCCPCH, the UE should detect a radio link failure . Until T315 is timeout the UE shall continue to find a new cell and SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is not in idle state by no response before T315 is timeout After T315 is timeout then the UE shall enter to idle mode The SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is in idle state., the UE transmits an RRC CONNECTION REQUEST message on the uplink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T315=30 seconds
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state, after making a successful outgoing call.
4				The SS stops transmitting and receiving on the radio link except the PCCPCH.
5		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI) before T315 is timeout.
6				The SS confirms that the UE does not transmit a response for 30 seconds.
7		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI).
8		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause – must "Terminating Call" "Protocol Indicator" – must be FALSE
9		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	0 seconds
T315	30 seconds
N313	50

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Re-establishment timer - T315	30 seconds

PAGING TYPE 1

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call ~~whose kind is with one of the~~ supported services (<u>Conversational Call, Streaming</u> <u>Call, Interactive Call, Background Call, SMS</u> ~~speech, CS~~ ~~Data, PS data, SMS, Unspecified~~)
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card

8.1.4.10.5 Test requirement

After step 5 the UE shall not transmits an RRC CONNECTION REQUEST message.

After step 9 the UE shall have an RRC connection based on dedicated physical channel resources.
8.1.4.11 RRC
Connection Re-Establishment: Success(Unrecoverble error in RLC)

8.3.1.10 Cell Update: expiry of T307 after T305 expiry and being out of service area

8.3.1.10.1 Definition

8.3.1.10.2 Conformance requirement

This procedure is required to cater for the case of a failure to update UTRAN with the current cell, after the expiry of T307. In this case, the UE shall return to idle mode and perform cell reselection if possible.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.10.3 Test purpose

To confirm that the UE moves to idle mode after the expiry of T307, indicating that it is out of service area when attempting to perform a periodic cell updating procedure.

8.3.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH

Test Procedure

The UE is in CELL_PCH state at the start of the test. Before the expiry of periodic cell updating timer T305, SS starts to decrease the downlink transmission power such that the UE discovers that the cell is no longer suitable for camping and this results in a “out of service area” condition. The SS continues to listen to the uplink channel to detect possible attempts to perform a cell updating procedure. The UE shall not send CELL UPDATE message on the uplink DCCH, instead it triggers timer T307. After the expiry of timer T307 the UE shall enter idle state. This is confirmed by the SS₁ when it sends a PAGING TYPE 1 message to the UE using its U-RNTI identity, and the UE does not respond to the page. SS then attempts to page for the UE again, this time using PAGING TYPE 2 message sent on downlink DCCH. Likewise, the UE shall not respond to this page.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FAPCH state.
2				SS starts to decrease the transmission power until the cell is no longer suitable for camping. The UE shall detect that it is out of service area and refrains from transmitting CELL UPDATE message due to periodic cell updating.
3				The UE detects the expiry of timer T305 and it searches for other cells to camp on. ~~(T307 timer starts)~~ . After the expiry of timer T307, the UE ~~The UE~~ shall ~~enters to the idle state~~ mode.
4		←	PAGING TYPE 1	SS pages the UE at its assigned paging occasion using the allocated U-RNTI value. The UE shall not respond to this page as it has already entered the idle mode.
5		←	PAGING TYPE 2	SS pages the UE on the downlink DCCH. The UE shall not respond to this page.

Specific Message Contents

Paging Type 1 (Step 4)

Information Element	Value/remark
Page record list - Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI BCCH Modification info	UTRAN Originator Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 1111' Not Present.

Paging Type 2 (Step 5)

Information Element	Value/remark
Integrity check info Paging cause CN domain identity Paging Record Type Identifier	Not Present ~~Terminating PS Data Call~~ Set to a cause corresponding to one radio access bearer services supported by the UE. CS-Domain IMSI- ~~(DS-41)~~

8.3.1.10.5 Test requirement

After step 4 the UE shall remain in the idle mode and not respond to the paging message sent on PCCH.

After step 5 the UE shall remain in the idle mode and not respond to the paging message addressed to it on the DCCH.

8.3.1.15 Cell Update: Acknowledged Mode RLC Reset

8.3.1.15.1 Definition

8.3.1.15.2

Conformance Requirement

In CELL_FACH, the UE shall ensure that all AM RLC entities (for both signalling links and u-plane links) are operational. In the event that an unrecoverable error has occurred (~~detectable when the amount of retransmissions of RESET_PDU reaches the value of MAX_DAT and the UE fails to receive any acknowledgements~~), the UE shall trigger cell update procedure to report this event. The UE shall send CELL UPDATE message on the uplink CCCH and set the appropriate AM_RLC error indicator IE(s) to TRUE. After receiving the CELL UPDATE CONFIRM message, the UE shall reset the affected AM RLC entities and then resume transmission and reception activities.

8.3.1.15.3

Test Purpose

To confirm that the UE reports the occurrence of an unrecoverable error in a C-plane AM RLC entity by initiating a cell update procedure. To confirm that the UE is able to resume normal C-plane data transmission and reception after the completion of cell update procedure.

8.3.1.15.4

Method of Test

Initial Condition

System Simulator: 1 cell

UE: Idle Mode

Test Procedure

The UE is initially in idle mode and camped onto cell 1. SS pages the UE using the IMSI identity stored in the test USIM card, with stating the cause stated as "Terminating PS Data Call" a terminating call with one of the traffic classes supported by the UE. The UE shall respond by transmitting the RRC CONNECTION REQUEST message on the uplink CCCH, triggering the start of RRC connection establishment procedure. SS assigns common physical resources to the UE by sending RRC CONNECTION SETUP message. The UE shall reply with RRC CONNECTION SETUP COMPLETE on the DCCH before transiting to CELL_FACH state. Next, SS sends RADIO BEARER SETUP message on the DCCH using AM mode to establish a DTCH logical channel for u-plane packet data transfer. The UE shall reply with a RADIO BEARER SETUP COMPLETE message, sent using AM RLC on the DCCH. Then it activates the associated DTCH logical channel for user data transmission and reception. SS does not acknowledge the RADIO BEARER SETUP COMPLETE message. The UE shall continue to transmit the AM PDU carrying RADIO BEARER COMPLETE message until the maximum re-transmission count is reached. Thereafter, the UE shall start sending RESET PDUs to request that the AM RLC entity for RRC signalling be re-initialized. SS ignores the requests and wait for a duration equivalent to ~~the period equivalent to~~ (MAX_RST+1) times expiry of Timer_RST. This figure is specified in IE"RLC info" of RADIO BEARER SETUP message in step 6. At this point, the UE shall initiate a cell update procedure by transmitting CELL UPDATE message on the uplink CCCH. The CELL UPDATE message shall specify the value "TRUE" in IE"-AM_RLC error indicator (for C-plane)". SS replies with CELL UPDATE CONFIRM message using the default message content. SS then attempts to perform a local authentication by transmitting a COUNTER CHECK ~~pages the UE using PAGING TYPE 2 message using AM RLC on DCCH~~. The UE shall respond by sending an UPLINK DIRECT TRANSFER COUNTER RESPONSE message on the uplink DCCH, ~~which shall be embedded in an PDU originating from the AM RLC entity for RRC signalling verifying that the AM RLC entity for RRC signalling was successfully reset~~.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is initially in idle mode.
2		←	PAGING TYPE 1	SS pages the UE, citing the reason <u>“Terminating PS data call”</u> cause as a terminating call with one of the supported traffic classes in the PAGING TYPE 1 message.
3		→	RRC CONNECTION REQUEST	Sent on CCCH using transparent mode.
4		←	RRC CONNECTION SETUP	Allocate common physical resources for signalling RBs.
5		→	RRC CONNECTION SETUP COMPLETE	Sent on CCCH using transparent mode.
6		←	RADIO BEARER SETUP	Establishes a DTCH logical channel operating in AM mode.
7		→	RADIO BEARER SETUP COMPLETE	UE shall stay in CELL_FACH state. SS does not acknowledge this AM PDU. The UE shall re-transmit this AM PDU until the maximum number has been reached.
8				UE shall start to transmit RESET PDU using AM RLC on the DCCH. SS does not respond to any PDU frames originating from the UE, and it waits for a period equivalent to (MAX_RST+1) times expiry of Timer_RST. This figure is specified in IE“RLC info” of RADIO BEARER SETUP message in step 6.
9		→	CELL UPDATE	UE shall send this message on CCCH. IE“AM_RLC Error Indication (for C-plane)” shall be set to ‘TRUE’
10		←	CELL UPDATE CONFIRM	“DRX Indicator” set to “No DRX”. UE shall transit to CELL_FACH state.
11		←	~~PAGING TYPE 2~~ COUNTER CHECK	~~SS pages the UE requests for a local authentication of the amount of data sent/received during the lifetime of the RRC connection.~~
12		→	~~UPLINK DIRECT TRANSFER~~ COUNTER RESPONSE	This message shall be transmitted using AM RLC for RRC signalling on the uplink DCCH.

Specific Message Contents

PAGING TYPE 1 (Step 2)

Use the same message sub-type entitled “TM (Packet in PS)” found in Clause 9 of TS34.108.

RRC CONNECTION REQUEST (Step 3)

Information Element	Value/remark
Initial UE Identity	Check to see if set to same value as the IMSI identity stored in the test USIM card.
Initial UE Capability	Check to see if set to '4 to 8' or '16 to 32'.
- Maximum number of AM entities	Check to see if set to 'Terminating PS-Call of a supported traffic class'.
Establishment Cause	Check to see if set to 'FALSE'.
Protocol Error Indicator	Not checked.
Measured Results on RACH	

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type entitled "Transition to CELL_FACH" found in Clause 9 of TS34.108.

RRC CONNECTION SETUP COMPLETE (Step 5)

Only the message type IE is checked in this message.

RADIO BEARER SETUP (Step 6)

Use the same message sub-type entitled "Packet to CELL_FACH from CELL_FACH in PS" found in Clause 9 of TS34.108.

RADIO BEARER SETUP COMPLETE (Step 7)

Only the message type IE is checked for this message.

CELL UPDATE (Step 9)

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Not checked
Integrity check info	Check to see if set to 'FALSE'
AM_RLC error indicator (for C-plane)	Check to see if set to 'TRUE'
AM_RLC error indicator (for U-plane)	Not checked
Cell Update Cause	Check to see if it is absent or set to 'FALSE'
Protocol error indicator	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Protocol error information	

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in Clause 9 of TS34.108.

~~PAGING TYPE 2~~COUNTER CHECK (Step 11)

Information Element	Values/Remarks
~~Paging cause~~	~~Terminating PS Data Call~~
~~CN domain identity~~	~~PS Domain~~
~~Paging Record Type Identifier~~	~~Supported IMSI~~
~~Integrity check info~~	~~Not present~~
~~RB COUNT-C MSB Information~~	~~5~~
~~- RB Identity~~	~~Set to an arbitrary integer equals to the 25 MSBs from COUNT-C for RB#5~~
~~- COUNT-C-MSB-uplink~~	~~Set to an arbitrary integer equals to the 25 MSBs from COUNT-C for RB#5~~
~~- COUNT-C-MSB-downlink~~	~~Set to an arbitrary integer equals to the 25 MSBs from COUNT-C for RB#5~~

~~UPLINK DIRECT TRANSFER COUNTER RESPONSE (Step 12)~~

Only the message type IE is checked for this message.

Information Element	Values/Remarks
~~Integrity check info~~	~~Not checked~~
~~RB COUNT-C Information~~	~~Not checked~~
~~- RB Identity~~	
~~- COUNT-C-uplink~~	
~~- COUNT-C-downlink~~	

8.3.1.15.5 Test Requirement

After step 8 the UE shall transmit a CELL UPDATE message on the uplink CCCH to report the occurrence of an unrecoverable error in AM RLC entity for C-plane data.

After step 11 the UE shall send a ~~UPLINK DIRECT TRANSFER~~ COUNTER CHECK RESPONSE message on the uplink DCCH. This message shall be sent using the AM RLC entity for RRC signalling.

8.4.1.1 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.1.1 Definition

8.4.1.1.2 Conformance requirement

After a state transition from idle mode to CELL_DCH state, the UE shall continue to monitor the list of neighbouring cells which is specified in the SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages on BCCH. The UE shall send a MEASUREMENT REPORT message when reporting criteria are satisfied. During CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, it shall terminate existing monitoring activities for the neighbouring cells previously known from SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages. It shall perform the measurement and reporting tasks based on the latest MEASUREMENT CONTROL message received.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.1.3 Test Purpose

To confirm that the UE continue to monitor CPICH RSCP measurement quantity of the neighbour cells after it has entered the CELL_DCH state from idle mode. When the criteria specified in BCCH have been met, it shall report the measurements to the SS using MEASUREMENT REPORT messages. To confirm that in CELL_DCH state, the UE respond to a modification of measurement criteria and adjust its measurement and reporting mechanism accordingly. To confirm that the UE terminates monitoring and measurement activities for the neighbour cells found in SYSTEM INFORMATION BLOCK TYPE 11 (or 12) message, after it has received a MEASUREMENT CONTROL message which specifies the measurement type to be "intra-frequency measurement". To confirm that the UE restart the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.

8.4.1.1.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and the downlink P-CPICH has a transmission level (RSCP) of – 40 dBm, cell 2 is also active but with a P-CPICH transmission power 10dB below cell 1.

UE : idle state after having successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 11 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = "intra-frequency measurement", measurement quantity = "CPICH RSCP", report criteria = "periodic reporting criteria", reporting interval = "12 seconds".

SS pages the UE with the cause ~~set to "Incoming circuit-switched terminating call"~~ of a supported traffic class. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates uplink and downlink DPDCH physical resources to the UE. UE then moves to CELL_DCH state. After approximately 12 seconds, the UE shall transmit a

MEASUREMENT REPORT message with measurement readings from cell 2. SS waits for 25 seconds after the sending of RRC CONNECTION SETUP message to verify that 2 consecutive MEASUREMENT REPORT messages are received.

Then SS modifies the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages. The measurement parameters for cell 2 are changed in the following manner: report criteria = "event-trigger", event identity = "1f", reporting threshold = "-65 dBm". SS then begins to decrease the transmission power of P-CPICH in cell 2 progressively at the rate of 0.5dB/sec. SS checks to see that no MEASUREMENT REPORT messages are sent within the next 12 seconds (which is due to periodic reporting). The UE shall detect this change and discontinue the periodic reporting of RSCP value estimation from cell 2. After approximately 35 seconds later, the UE shall transmit MEASUREMENT REPORT message to indicate that the RSCP of cell 2 has reached the threshold specified. In this message, the correct measurement identity shall be stated. Finally, SS sends a MEASUREMENT CONTROL message to request a periodic reporting of measurement quantity P-CPICH Ec/No from cell 2. The reporting interval is set to 32 seconds. Within the MEASUREMENT CONTROL message, a new measurement identity is assigned. After receiving this message, the UE shall stop reporting quantity P-CPICH RSCP of cell 2. Moreover, the UE shall start to transmit MEASUREMENT REPORT messages with the contents pertaining to new measurement identity on cell 2's P-CPICH Ec/No.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 11	The UE is idle mode and camped onto cell 1. Cell 2 is also active but the P-CPICH has a RSCP 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		→	RRC CONNECTION SETUP	SS allocates DPCH physical channels to UE
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_DCH state.
6		→	MEASUREMENT REPORT	SS waits for 25 seconds. It shall receive 2 consecutive MEASUREMENT REPORT messages
7		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	SS modifies the contents of system information, so that measurement for cell 2 is changed to "event trigger" with "event identity" set to 1f. SS then reduces the transmission power of cell 2's P-CPICH progressively by 0.5dB/sec.
8				SS monitors the DCCH for the next 12 seconds to make sure that no further MEASUREMENT REPORT messages are transmitted.

9	→	MEASUREMENT REPORT	UE shall transmit this message approximately 35 seconds after step 7, as its internal estimation of the RSCP of cell 2 has dropped below the threshold.
10	←	MEASUREMENT CONTROL	A new measurement identity is assigned, with the reporting quantity changed to cell 2's P-CPICH Ec/No
11	→	MEASUREMENT REPORT	SS verifies that UE transmits MEASUREMENT REPORT messages periodically to report the P-CPICH Ec/No value of cell 2.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 11 (Step 1)

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	1
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-115dB
- Qrxlevmin	-20dB
- Intra-frequency measurement quantity	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity	
- Intra-frequency measurement for RACH reporting	No report
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	
- Reporting information for state CELL_DCH	No report
- Intra-frequency reporting quantity	FALSE
- Reporting quantities for active set cells	FALSE
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	
- Pathloss	No report
- CFN-SFN observed time difference	TRUE
- Reporting quantities for monitored set cells	FALSE
- SFN-SFN observed time difference	TRUE
- Cell identity	
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	Not present
- CFN-SFN observed time difference	Periodical reporting criteria
- Reporting quantities for unlisted cells	Infinity
- CHOICE report criteria	12 seconds
- Amount of reporting	Not present
- Reporting interval	
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response"; terminating call of a supported traffic class
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content, which is marked as "Transition to CELL_DCH".

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 1
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if within acceptable range
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MASTER INFORMATION BLOCK (Step 7)

Information Element	Value/Remarks
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 12 (Step 7)

Information Element	Value/Remark

Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	2
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	FALSE
- CPICH Ec/No	TRUE
- CPICH RSCP	
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	Event type 1f
- Triggering condition	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- W	Not present
- Hysteresis	0.5dB
- Threshold Used Frequency	-65dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present-65dBm
- Reporting Threshold	0
- Time to trigger	Infinity
- Amount of reporting	8 seconds
- Reporting Interval	Not Present
- Reporting Cell Status	Not present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	Not Present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 2
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if this is below threshold value specified
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- Intra-frequency event identity	Check to see if this is set to event '1f'
- Cell measured event results	
- Primary CPICH Info	
- Primary scrambling code	Check to see if it's set to cell 2's assigned scrambling code

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	Same as in default message content
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds

MEASUREMENT REPORT (Step 11)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 3
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

8.4.1.1.5

Test Requirement

After step 5 the UE shall start to transmit MEASUREMENT REPORT message. The measurement quantity "CPICH RSCP" shall be reported to the SS at 12 seconds interval.

After step 7 UE shall not transmit any MEASUREMENT REPORT messages within 12 seconds after SS has modified the MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages.

The UE shall transmit a MEASUREMENT REPORT message roughly 35 seconds after step 7, to report that the RSCP value for cell 2 has dropped below the threshold.

After step 10 the UE shall transmit MEASUREMENT REPORT messages at 32 seconds interval, with the IE "Measurement Identity" set to 3. The message shall also include an estimation of cell 2's P-CPICH Ec/No value.

8.4.1.2 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.2.1 Definition

8.4.1.2.2 Conformance requirement

After entering CELL_DCH state from idle mode, the UE shall discontinue the monitoring of the list of neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages on BCCH.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.2.3 Test Purpose

To confirm that the UE terminates the monitoring activities of the list of neighbouring cell assigned in the IE "inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, after it enters CELL_DCH state from idle mode.

8.4.1.2.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a ~~downlink~~ transmission level (RSCP) of –50 dBm for P-CPICH, cell 2 is also active but with a transmission power 20dB below cell 1. The carrier frequency of cell ~~2~~ 1 in the uplink direction is 1 UARFCN above that of cell 2, and in the downlink direction cell 1 carrier is 1 UARFCN ~~below~~ above that of cell ~~2~~.

UE : idle state ~~by~~ has ~~after it has~~ successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH RSCP".

SS pages the UE ~~with~~, stating the paging cause as terminating call for one of the traffic classes supported by the UE ~~"Incoming circuit switched call"~~. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates uplink and downlink DPDCH physical resources to the UE. UE then moves to CELL_DCH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from cells belonging to the monitored set.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but ~~has its~~ transmission power is 20dB below that of cell 1. The SYSTEM INFORMATION BLOCK TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		↔	RRC CONNECTION SETUP	SS allocates DPDCH physical channels to UE, using compressed mode format
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the RRC CONNECTION SETUP message and moves to CELL_DCH state.
6				SS raises the transmission power of cell 2 by 10dB. SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	Not Present
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	Set to the next uplink UARFCN after cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20 dB, -115dBm
- Inter-frequency measurement quantity	
CHOICE Reporting criteria	Inter-frequency reporting criteria
- Filter coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	2.0dB
- Hysteresis	0 sec
- Time to trigger	Infinity
- Amount of reporting	0
- Reporting interval	Not Present
- Parameters required for each non used frequency	
- Threshold non-used frequency	-56.5dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response"; Terminating call of a supported traffic class
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type found in default message content TS 34.108 clause 9 which is marked as “Transition to CELL_DCH”, with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Active
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR	2.0
- DeltaSIRAfter	1.0

8.4.1.2.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity ~~from~~ of cell 2.

8.4.1.3 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

During a transition from idle mode to CELL_FACH state, the UE shall start to monitor neighbouring cells listed in the IE “Intra-frequency cell info” received in SYSTEM INFORMATION BLOCK TYPE 12 (or 11). If a measurement report criteria is also specified, the UE shall store this information and apply these rules when deciding to transmit MEASUREMENT REPORT messages during a subsequent transition to CELL_DCH state. If reporting during RACH transmissions ~~are is~~ dictated by the UTRAN, the UE shall append the relevant measurement information when sending messages on RACH (e.g. RRC CONNECTION REQUEST and CELL UPDATE).

Reference

3GPP TS 25.331, clause 8.4.1.9

8.4.1.3.3 Test Purpose

To confirm that the UE begins to monitor the neighbouring cells in the monitored list after it has entered the CELL_FACH state. The list of neighbouring cell can be known from SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages. If information regarding the intra-frequency measurement reporting criteria is also broadcasted, the UE shall save this information and apply the criteria during a subsequent transition to CELL_DCH state. If RACH measurement reporting is dictated in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, the UE shall include these measurements when transmitting on the RACH channel.

8.4.1.3.4 Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active. Cell 2 is transmitting at 15 dB below cell 1.

UE : idle state and camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = “intra-frequency measurement”, measurement quantity = “CPICH Ec/No”, report criteria = “periodic reporting criteria”, reporting interval = “12 seconds”. In the system information message, reporting of CPICH Ec/No is also required for intra-frequency reporting when transmitting RACH messages to cell 1.

SS pages the UE with the cause ~~“Incoming packet-switched call”~~ specified as terminating call of one of the traffic classes supported by the UE. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH (FACH) physical channels for uplink and downlink use. UE shall then enter CELL_FACH state. SS waits until timer T305 expires, the UE shall send a CELL UPDATE message including the measurement reading of cell 2’s CPICH Ec/No values. SS then reply with CELL UPDATE CONFIRM message without changing the physical channel resources.

In the next sequence, SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates DPDCH channels to the UE. The UE shall transit to CELL_DCH state and send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcasted on SYSTEM INFORMATION BLOCK TYPE 12 (or 11) when the UE was still in idle mode.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 2, SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 15dB below that of cell 1. SYSTEM INFORMATION TYPE 2 and 12 to be transmitted are different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE, ~~stating the cause as an incoming packet-switched call.~~
3		→	RRC CONNECTION REQUEST	The Ec/No value of P-CPICH of Cell 1 should be reported.
4		←	RRC CONNECTION SETUP	SS allocates common physical channels to UE.
5		→	RRC CONNECTION COMPLETE	UE shall enter CELL_FACH state, <u>and</u> transmits this message to acknowledge the SETUP message.

6			SS waits for 5 minutes (for the expiry of T305 timer), so that UE will initiate a periodic cell updating procedure.
7	→	CELL UPDATE	This message shall contain measurement readings of CPICH Ec/No for cell 1.
8	←	CELL UPDATE CONFIRM	SS does not change the physical channel allocation.
9	←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns DPCH physical resources to the UE, but keeping the parameters for transport channels and RBs unchanged.
10	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state after sending this message.
11	→	MEASUREMENT REPORT	UE shall begin to report cell 2's CPICH Ec/No value periodically at 12 seconds interval. The measurement identity shall match that broadcasted in step 1

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 2

Information Element	Value/Remarks
UE Timers and constants in connected mode - T305	5 minutes.

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	
FACH measurement occasion info	
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	5
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin - Intra-frequency	-20dB, -115dBm
Measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	12 seconds
- Reporting Cell Status	Not Present
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

PAGING TYPE 1

Information Element	Value/Remarks
Paging record list - Paging Record - CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE identity - IMSI (DS-41) <u>or IMSI (GSM-MAP)</u>	CN Originator Terminating ~~PS Data Call~~ , <u>for one of the supported traffic classes</u> PS Domain IMSI (DS-41) <u>or IMSI (GSM-MAP)</u> Set to the same IMSI (DS-41) <u>or IMSI (GSM-MAP)</u> digits found in the test USIM.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Initial UE Identity	Check to see if it is the same as in PAGING TYPE 1 message
Establishment cause	Check to see if set to <u>terminating call of one of the traffic classes supported</u> "Paging Response"
Measured results on RACH - Measured result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measured results for monitored cells	Check to see if value is present Check to see if this IE is absent

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.4.9 of TS34.108, which is entitled "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if set to same U-RNTI value assigned in RRC CONNECTION SETUP message.
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell update cause	Check to see if set to 'Periodic cell updating'
Protocol error indicator	Check to see if set to 'FALSE'
Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measurement results for monitored cells	CPICH Ec/No Checked to see if set to within an acceptable range. Checked to see if this IE is not present.
Protocol error information	Check to see if set to 'FALSE'

PHYSICAL CHANNEL RECONFIGURATION

Use the same message sub-type found in Clause 8.4.9 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH".

MEASUREMENT REPORT

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	Check to see if set to "Intra-frequency measured results list"
- CHOICE measurement	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is within acceptable range
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

8.4.1.3.5 Test Requirement

After step 3 the UE shall send RRC CONNECTION REQUEST message in response to the paging message sent by the SS, which includes reading of the current cell's CPICH Ec/No value.

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages.

After step 6 the UE shall initiate cell updating procedure by transmitting CELL UPDATE message. In this message, the cause shall be set to "periodic cell updating". It shall include measurement readings for the current cell (cell 1) CPICH Ec/No measurement quantity.

After step 10 the UE shall move to CELL_DCH state and transmit MEASUREMENT REPORT messages at 12 seconds interval. In these messages, neighbouring cell 2's CPICH Ec/No value shall be reported. The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in SYSTEM INFORMATION BLOCK TYPE 12 messages transmitted in step 1.

8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.4.1 Definition

8.4.1.4.2 Conformance requirement

After entering CELL_FACH state from idle mode, the UE shall start to monitor the list of "inter-frequency" neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages on BCCH/FACH.

Reference

3GPP TS 25.331, clause 8.4.1.10

8.4.1.4.3 Test Purpose

To confirm that the UE begins to monitor the list of neighbouring cell assigned in the IE "inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, after it enters CELL_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

8.4.1.4.3

Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a downlink transmission level for CPICH RSCP at -40 dBm, cell 2 is also active but with a transmission power 10dB below cell 1. The carrier frequency of cell 2 in the uplink direction is 1 UARFCN above that of cell 1, and the downlink carrier is 1 UARFCN below that of cell 1.

UE : idle state and has successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list for inter-frequency measurement type. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH Ec/No".

SS pages the UE with the cause "~~Incoming packet-switched set to terminating call~~" of a supported traffic class. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH channel in the uplink and S-CCPCH(FACH) channel on the downlink to the UE. UE then moves to CELL_FACH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from inter-frequency cells belonging to the monitored set. SS decreases the transmission power of CPICH in cell 1 by 10dB. At the same time, it raises the corresponding downlink transmission power of cell 2 by 10dB. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to report this event. Upon receiving this message, SS replies with the default CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	SS allocates PRACH and S-CCPCH resources to UE
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_FACH state.
6				SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.
7				SS decreases the transmission power of cell 1 by 10dB and increases cell 2's downlink power by 10dB.
8		→	CELL UPDATE	UE shall detect that cell 2 has become stronger than cell 1. It sends this message after reselecting to cell 2

9	←	CELL UPDATE CONFIRM	Use default message.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 12

clauseInformation Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	Set to the next uplink UARFCN after cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-frequency measurement quantity	
CHOICE Reporting criteria	Inter-frequency reporting criteria
- Filter coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	2.0dB
- Hysteresis	0 sec
- Time to trigger	Infinity
- Amount of reporting	0
- Reporting interval	Not Present
- Parameters required for each non used frequency	
- Threshold non-used frequency	-55dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

PAGING TYPE 1

For this message, use the same message contents as in step 2 of clause 8. 4.1.3.3.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to <u>terminating call of a supported traffic class</u> ~~"Paging Response"~~ .
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content defined in TS 34.108 Clause 8, which is marked as "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the message sub-type in default message content defined in TS 34.108 Clause 8.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity for cell 2.

After step 7 the UE shall reselect to cell 2 and transmit a CELL UPDATE message on the uplink CCCH of cell 2.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

When transiting from CELL_DCH state to CELL_FACH state, the UE shall terminate all reporting activities related to inter-frequency measurements. After reaching CELL_FACH state, the UE shall begin to monitor neighbouring cells listed in the IE "inter-frequency cell info" of the system information type 12 message.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.6.3 Test Purpose

To verify that UE ceases to transmit MEASUREMENT REPORT messages when moving from CELL_DCH state to CELL_FACH, even if it has detected that reporting criteria have been satisfied in CELL_FACH state. To verify that the UE extracts information for inter-frequency measurement from system information messages after reaching CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

SS: 2 cells – Cell 1 is active while cell 2 is inactive. Cell 2 is allocated a frequency which is 1 UARFCN away from cell 1 in both uplink and downlink directions. The applicable radio conditions for cell 1 and cell 2 are as follow:

	Cell 1	Cell 2
UARFCN (N_u and N_d)	Channel 1	Channel 2

CPICH RSCP	-75 dBm	-85 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm
S	15	5

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode. SS pages the UE with the establishment cause set to “Terminating PS Data Call” for one of the supported traffic classes. The SYSTEM INFORMATION TYPE 12 message is modified so that no measurement tasks are to be performed by the UE. The UE shall respond to the paging by sending a RRC CONNECTION REQUEST message on the PRACH. Upon receiving this message, SS allocates dedicated DPCH physical channels to the UE by transmitting RRC CONNECTION SETUP message. The UE shall reply by transmitting a RRC CONNECTION SETUP COMPLETE message. SS then checks the IE “Measurement Capability” of this message and verifies that the UE is capable of performing inter-frequency measurements under FDD mode. After the confirmation of the UE inter-frequency measurement ability, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, information related to the radio bearers and uplink/downlink radio resources remain unchanged as compared to the equivalent IEs found in RRC CONNECTION SETUP message. The only difference concerns IE “DPCH compressed mode info”, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS then sends a MEASUREMENT CONTROL message to the UE, specifying that cell 2 be the measurement object for inter-frequency type measurement. The periodic reporting criterion is selected for this measurement. SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing measured result of cell 2’s reporting quantity (CPICH Ec/No). SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, requesting the UE to switch its uplink and downlink DPCH to common physical channels. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then moves to CELL_FACH state. SS waits for another 8 seconds to detect any possible uplink MEASUREMENT REPORT messages as a result of inter-frequency measurements. SS then increases the transmission power of cell 2 by 20 dBm. SS waits for [x] seconds to allow the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 2, specifying the cause as “cell re-selection”. SS replies with CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and camped onto cell 1. SYSTEM INFORMATION BLOCK TYPE 12 is redefined, disabling all measurement and reporting activities.
2		←	PAGING TYPE 1	SS pages UE with cause set to ~~“incoming circuit-switched terminating call”~~ of a supported traffic class.
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	Uplink and downlink DPDCH resources are allocated.
5		→	RRC CONNECTION SETUP COMPLETE	UE shall indicate that it's capable of performing inter-frequency measurement for FDD mode.
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall enter CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that cell 2 be monitored. SS waits for 8 seconds.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 2's CPICH Ec/No value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS changes the physical channel allocation to common channel configuration.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12				SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected.
13				SS changes SYSTEM INFORMATION BLOCK TYPE 12 message to request that cell 2 be included in neighbour cell list for inter-frequency measurements.
14				SS increases the transmission power of cell 2 by 20 dBm, and then waits for a [x] seconds to allow the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall detect that cell 2 has become the best cell and then perform cell re-selection procedure.
16		←	CELL UPDATE CONFIRM	SS acknowledges the cell 2 is updated.

Notes:

The value [x] seconds is TBD, after the cell re-selection duration is determined from TS 25.304.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	2
- k_UTRA	Not Present
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	Not Present
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE Internal measurement system information	Not Present

PAGING TYPE 1

Information Element	Value/Remarks
Paging Record List	
- Paging Record	CN Originator
- CHOICE Paging originator	Terminating PS Data Call of one of the supported traffic classes
- Paging cause	CS Domain
- CN domain identity	IMSI(DS-41) or IMSI(GSM-MAP)
- CHOICE UE Identity	Set to the same value-digits as in USIM card
- IMSI(DS-41) or IMSI(GSM-MAP)	
BCCH modification info	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.4.9 of TS34.108, which is entitled “Transition to CELL_DCH”

RRC CONNECTION SETUP COMPLETE

Information Element	Value/Remarks
Hyperframe Number	Not checked.
UE Radio access capability	
- Conformance test compliance	Checked to see if set to 'R99'
- PDCP capability	Not checked.
- RLC capability	Not checked.
- Transport channel capability	Not checked.
- RF capability	Not checked.
- Physical channel capability	Not checked.
- UE multi-mode/multi-RAT capability	Not checked.
- Security capability	Not checked.
- LCS capability	Not checked.
- Measurement capability	
- FDD measurements DL	Checked to see if set to 'TRUE'
- TDD measurements DL	Not checked.
- GSM measurements DL	Not checked.
- GSM 900 DL	Not checked.
- DCS 1800 DL	Not checked.
- GSM 1900 DL	Not checked.
- Multi-carrier measurement DL	Not checked.
- FDD measurements UL	Checked to see if set to 'TRUE'
- TDD measurements UL	Not checked.
- GSM measurements UL	Not checked.
- GSM 900 UL	Not checked.
- DCS 1800 UL	Not checked.
- GSM 1900 UL	Not checked.
- Multi-carrier measurement UL	Not checked.
UE system specific capability	Not checked.

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Clause 8.4.9 of TS34.108, which is entitled “(Packet to CELL_DCH from CELL_DCH in PS”, with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- Scrambling code change	2.0
- Downlink frame type	1.0
- DeltaSIR	
- DeltaSIRAfter	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/Remark
Measurement Identity Number	15
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 2
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 15
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 2
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 2
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Use the same message sub-type found in Clause 8.49 of TS34.108, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in RRC CONNECTION SETUP message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the same message sub-type found in Clause ~~8.4.9~~ of TS34.108.

8.4.1.6.5 Test Requirement

After step 4 the UE shall transmit RRC CONNECTION SETUP COMPLETE message with the IE "Measurement capability", indicating that both uplink and downlink inter-frequency measurements for FDD mode are supported.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 2's CPICH Ec/No value.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 2's CPICH Ec/No value.

After step 14 the UE shall transmit CELL UPDATE message to inform that a cell reselection to cell 2 has occurred.

Annex A. Default RRC Message Contents

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Checked
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating <u>Conversational Speech</u> -Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

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Naantali, Finland, 28-30 August 2000

Document **T1S000162**
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CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
34.123-1 CR 010		Current Version: 3.0.0	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: T#9 list expected approval meeting # here ↑	for approval ☒ for information ☐	strategic ☐ non-strategic ☐	(for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐
(at least one should be marked with an X)

Source: Matsushita Communication Industry Co.,Ltd **Date:** 28/08/2000

Subject: Addition of RRC connection release procedure when using RLC TM mode on CCCH

Work item:

Category:	F Correction	☐	Release:	Phase 2	☐
	A Corresponds to a correction in an earlier release	☐		Release 96	☐
(only one category shall be marked with an X)	B Addition of feature	☒		Release 97	☐
	C Functional modification of feature	☐		Release 98	☐
	D Editorial modification	☐		Release 99	☒
				Release 00	☐

Reason for change: RRC CONNECTION RELEASE and RRC CONNECTION RELEASE COMPLETE messages are exchanged using RLC TM mode on CCCH, for the case when RRC connection re-establishment procedure is rejected by the UTRAN. See CR-346r3 for TS 25.331 v3.2.0 for this modification.

Clauses affected: 8.1.4.5

Other specs affected:	Other 3G core specifications	☐	→ List of CRs:	
	Other GSM core specifications	☐	→ List of CRs:	
	MS test specifications	☐	→ List of CRs:	
	BSS test specifications	☐	→ List of CRs:	
	O&M specifications	☐	→ List of CRs:	

Other comments:



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<----- double-click here for help and instructions on how to create a CR.

8.1.4.5 RRC Connection Re-Establishment: Failure (Release)

8.1.4.5.1 Definition

8.1.4.5.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. After the completion of cell re-selection and transiting to CELL_FACH state, the UE transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI" on the uplink CCCH to request for re-establishment of an RRC connection. The UTRAN transmits an RRC CONNECTION RELEASE message signifying that it is not able to accept the request, so the UE shall transmit an RRC CONNECTION RELEASE COMPLETE message to the UTRAN and goes back to idle mode.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.5.3 Test purpose

To confirm that the UE transmits an RRC CONNECTION RELEASE COMPLETE message and goes back to idle mode after its request to re-establish an RRC connection was rejected by the SS in the new cell. The request to re-establish should be made with an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI".

8.1.4.5.4 Method of test

Initial Condition

System Simulator : 2 cells • Cell 1 is active, Cell 2 is inactive •

UE: CELL_DCH state in cell 1

Test Procedure

The UE starts from CELL_DCH state in cell 1 after making a successful outgoing call. When the SS stops transmitting and receiving in a cell 1 and begins to broadcast the BCCH in a cell 2, the UE finds a should detect radio link failure and the presence of cell 2. It then enters CELL_FACH state and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE "U-RNTI" on the uplink CCCH. The SS replies with a RRC CONNECTION RELEASE message on the downlink CCCH using transport mode operation. After the UE receives an the RRC CONNECTION RELEASE message, it shall transmits an RRC CONNECTION RELEASE COMPLETE message on the uplink CCCH using RLC-TM. Finally, and it goes back to idle mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in a-cell 1 after completing a successful outgoing call setup.
2		←	BCCH	The SS transmits BCCH in a-cell 2
3				The SS stops transmitting and receiving in cell 1.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds a new cell 2 and transmits this message which includes the IE "U-RNTI".
5		←	RRC CONNECTION RELEASE	SS rejects the re-establishment request. <u>Sent on downlink CCCH using RLC-TM.</u>
6		→	RRC CONNECTION RELEASE COMPLETE	<u>This message shall be received on the uplink CCCH using RLC-TM.</u> The UE goes back to idle mode after sending this message.

Specific Message Contents

RRC CONNECTION RELEASE: TM

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	<u>Not Present</u>
<u>U-RNTI</u>	<u>Set to the same SRNC identity as previously assigned</u>
- SRNC Identity	<u>Set to the same S-RNTI identity as previously assigned</u>
- S-RNTI	<u>Not Present</u>
<u>Integrity check info</u>	<u>Checked</u>
<u>Number of RRC Message Transmissions</u>	<u>Not Present</u>
<u>Release cause</u>	<u>Check to see if set to "Re-establishment reject"</u>

RRC CONNECTION RELEASE COMPLETE: TM

<u>Information Element</u>	<u>Semantics description</u>
<u>Message Type</u> <u>U-RNTI</u> - SRNC Identity - S-RNTI <u>Integrity check info</u>	<u>Check the same SRNC identity as previously assigned</u> <u>Check the same S-RNTI identity as previously assigned</u> <u>Not checked.</u>

None

8.1.4.5.5 Test requirement

After step_3 the UE shall find ~~a~~the new cell 2 and transmits RRC CONNECTION RE-ESTABLISHMENT REQUEST to ask for re-connection of the radio link.

After step_5 the UE shall not transmit RRC CONNECTION RE-ESTABLISHMENT REQUEST message, instead it sends RRC CONNECTION RELEASE COMPLETE message on the uplink CCCH (transparent mode) and goes back to idle mode.

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Document **T1S000163**

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CHANGE REQUEST

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34.123-1 CR 011

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐ (for SMG use only)
non-strategic ☐

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Addition of the SIGNALLING CONNECTION RELEASE REQUEST procedure

Work item:

Category:

(only one category shall be marked with an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

☐
☐
☒
☐
☐

Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

☐
☐
☐
☐
☒
☐

Reason for change:

Signalling connection release request procedure was added into the TS25.331V3.3.0. A new test case in Section 8.1.9 is proposed for TS34.123-1 version 3.0.0. The addition was motivated by the need to for the UE to recover from abnormal situation due to events such as failed location update (or routing update).

Clauses affected: 8.1.9 (new)

Other specs affected:

Other 3G core specifications	☐	→ List of CRs:
Other GSM core specifications	☐	→ List of CRs:
MS test specifications	☐	→ List of CRs:
BSS test specifications	☐	→ List of CRs:
O&M specifications	☐	→ List of CRs:

Other comments:



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8.1.9 Signalling Connection Release Request

8.1.9.1 Definition

8.1.9.2 Conformance requirement

~~In case of an locationn update procedure, if the UE does not receive any response from UTRAN after it transmits a LOCATION UPDATING REQUEST message~~
The UE shall initiate the signalling connection release procedure when the higher layer entities in the UE request to release one or more signalling session (one example of such case is location update failure). In this case, the UE shall transmit a SIGNALLING CONNECTION RELEASE REQUEST message which includes the flow identifier of the signalling flow to be released. Then RRC connection release procedure is initiated.

Reference

3GPP TS 25.331 clause 8.1.14

8.1.9.3 Test purpose

~~To confirm that the UE transmits a SIGNALLING CONNECTION RELEASE REQUEST message after the UE does not it fails to receive the a response for the LOCATION UPDATING REQUEST message.~~

8.1.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : SwitchedPower off

Test Procedure

~~The UE is turneds on and the UEit shall find a suitable cell which should be to camped on. The UE shall initiate a location updating procedure. The UE shall establish thean RRC connection and transmits a LOCATION UPDATING REQUEST message using the INITIAL DIRECT TRANSFER message. As tThe SS does not respond to this message, and the UE shall send transmits a SIGNALLING CONNECTION RELEASE REQUEST message which includes the flow identifier aswith the same value as that in the INITIAL DIRECT TRANSFER message to initiate the RRC connection release procedure.~~

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>				<u>The UE turns is powered on.</u>
<u>2</u>	→		<u>RRC CONNECTION REQUEST</u>	<u>UE shall initiate the location updating procedure.</u>
<u>3</u>	←		<u>RRC CONNECTION SETUP</u>	<u>This message is not addressed to the UE.</u>
<u>4</u>	→		<u>RRC CONNECTION REQUEST</u>	<u>UE shall re-transmit the request message again after receiving a setup message not addressed to itself.</u>
<u>53</u>	←		<u>RRC CONNECTION SETUP</u>	
<u>64</u>				<u>The UE configures the layer 2 and layer 1 .</u>
<u>75</u>	→		<u>RRC CONNECTION SETUP COMPLETE</u>	
<u>86</u>	→		<u>INITIAL DIRECT TRANSFER (LOCATION UPDATING REQUEST)</u>	<u>LOCATION UPDATE REQUEST is embedded in this message transmission.</u>
<u>97</u>				<u>The SS does not respond and waits until the timer for location update procedure expires.</u>
<u>108</u>	→		<u>SIGNALLING CONNECTION RELEASE REQUEST</u>	

Specific Message ContentSIGNALLING CONNECTION RELEASE REQUEST (Step 108)

<u>Information Element</u>	<u>Value/remark</u>
<u>Flow Identifier</u>	<u>Check to see if this value is the as same as in the uplink INITIAL DIRECT TRANSFER message.</u>

8.1.9.5 Test requirement

After step 1 the UE shall initiate the LOCATION UPDATING procedure and establish an RRC connection.

After step 97 the UE shall transmit a SIGNALLING CONNECTION RELEASE REQUEST message which includes the same flow identifier as that found in the INITIAL DIRECT TRANSFER message.

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CHANGE REQUEST

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34.123-1 CR 012

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**

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for approval

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Form: CR cover sheet, version 2 for 3GPP and SMG

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Proposed change affects:

(at least one should be marked with an X)

(U)SIM

☐

ME

☒

UTRAN / Radio

☐

Core Network

☐

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Application of ciphering during conformance testing and changes to integrity mode protection related messages

Work item:

Category:

(only one category
shall be marked
with an X)

F Correction

A Corresponds to a correction in an earlier release

B Addition of feature

C Functional modification of feature

D Editorial modification

☐
☐
☐
☒
☐

Release:

Phase 2

Release 96

Release 97

Release 98

Release 99

Release 00

☐
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☐
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☐

Reason for change:

- Following the comments from T1SIG #11 meeting, ciphering mechanism is activated for RRC test cases. Messages in Annex A are modified to enable ciphering during RRC radio bearer control and RRC connection re-establishment procedures.
- For section 8.1.7, the following modifications were made:
 - Corrections of message names: SECURITY MODE CONTROL COMMAND, SECURITY MODE CONTROL COMPLETE.
 - "Radio bearer downlink ciphering activation time info" IE should be found in SECURITY MODE COMMAND message, while "Radio bearer uplink ciphering activation time info" IE is present in SECURITY MODE COMPLETE message.
 - SECURITY MODE COMMAND message was updated to reflect approved changes in CR-311r2 ("Security Capability" IE) for TS 25.331 v3.2.0.
 - Some editorial changes.
- For the case of integrity mode protection, clause 8.2.1.1 needs to be revised with respect to CR-311r2 ("Security Capability" IE) for TS 25.331 v3.2.0 as well:
 - Value of "Integrity protection algorithm" IE in RADIO BEARER SETUP message is updated.
 - "Hyper Frame Number" IE in RADIO BEARER SETUP COMPLETE message was found to be missing. This IE is added to the message.

Clauses affected:

8.1.7, 8.2.1.1, Annex A

Other specs

Affected:

Other 3G core specifications

☐

→ List of CRs:

Other GSM core specifications

☐

→ List of CRs:

MS test specifications
BSS test specifications
O&M specifications

X

→ List of CRs: CR-XXX to 34.108
→ List of CRs:
→ List of CRs:

**Other
comments:**



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8.1.7 Security mode control

8.1.7.1 Definition

8.1.7.2 Conformance requirement

1. This procedure is used to trigger the start of ciphering or to commands ~~the a~~ change of the cipher key, both for the signalling link and for a user plane connection. ~~The ciphering is configured in both directions.~~
2. The SRNC transmits a SECURITY MODE CONTROL-COMMAND message to the UE, which indicates the ~~uplink-downlink Activation Time~~ when the ciphering shall start to be applied in uplink. The UE shall apply the old ciphering configuration before the stated downlink activation time. It shall ~~SRNC~~ starts to decipher using the new ciphering configuration at the uplink-downlink Activation Time.
3. ~~When~~ After the UE ~~receives~~ transmits the SECURITY MODE CONTROL-COMPLETEMAND message, it starts ~~to ciphering~~ transmission in the uplink using the new configuration at the uplink Activation Time. It shall transmits a SECURITY MODE CONTROL-COMPLETE message, which includes a ~~down~~uplink Activation Time, and ~~starts configure the downlink reception to receives in the~~ using new ciphering configuration at that the beginning of downlink Activation Time. ~~When the SRNC receives the SECURITY MODE CONTROL-COMPLETE, it starts ciphering transmission in the new configuration at the downlink Activation Time.~~

Reference

3GPP TS 25.331 clause 8.1.912

8.1.7.3 Test purpose

To confirm that the UE correctly communicates to the SS ~~UTRAN using each and~~ activates the new ciphering functions configuration after the stated each Activation Time time. To confirm that ~~when after~~ the UE receives a SECURITY MODE CONTROL-COMMAND message, which includes the uplink Activation Time and it transmits a SECURITY MODE CONTROL-COMPLETE message to the UTRAN using the old ciphering configuration which includes the downlink Activation Time.

8.1.7.4 Method of test

Initial Condition

System Simulator : 1_cell

UE : CELL_DCH

Test Procedure

The UE is in the RRC connected state ~~on the DCCELL_DCH~~. The SS transmits a SECURITY MODE COMMAND message in which ciphering is requested to be activated, but the IE "Ciphering algorithm" is set to an unknown value. The UE shall not trigger any ciphering algorithm and it shall respond by sending SECURITY MODE FAILURE message on the DCCH. Next, The SS transmits a valid SECURITY MODE CONTROL-COMMAND message which includes the ~~uplink-downlink Activation Time~~ for RB 23 and RB 34. Then the UE shall start to configure ciphering in updownlink after the Activation Time and transmits a SECURITY MODE CONTROL-COMPLETE message which ~~includes~~ contains the ~~downlink-uplink Activation Time~~ for RB 23 and RB 34. The UE starts to cipher in downlink after the Activation Time. Finally the UE ~~correctly communicates using each ciphering functions~~. The UE shall be able to communicate with the SS in the downlink direction after the downlink activation time has passed. Moreover, it shall apply the ciphering algorithm in the uplink direction.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on DCCH
2		←	SECURITY MODE ~~CONTROL~~ COMMAND	IE "Ciphering Algorithm" is set to an ~~spare~~ invalid value
3		→	SECURITY MODE FAILURE	IE "Failure Cause" should be set to "Protocol Error" and IE "Protocol Error Information" should be set to "Information element value not comprehended".
4		←	SECURITY MODE ~~CONTROL~~ COMMAND	See specific message contents. ~~For uplink transmissions, new ciphering configuration should be active after 255 frames from current CFN. SS checks to see~~
5		→	SECURITY MODE ~~CONTROL~~ COMPLETE	~~After the downlink Activation Time the downlink ciphering function is active.. SS starts to verify that this message is sent unciphered.~~
46				~~Both Ciphering functions is active so the communication is done correctly.. In uplink direction, SS checks that all data from RB 23 and RB 34 are ciphered. In the downlink direction, SS verifies that data are ciphered only after the RLC sequence numbers indicated in step 4 have elapsed.~~

Specific Message Contents

SECURITY MODE COMMAND (Step 2)

Information Element	Value/remark
<u>Ciphering mode info</u>	
<u>Ciphering mode command</u>	<u>Start</u>
<u>Ciphering algorithm</u>	1 of the 15 spare values
<u>Security capability</u>	<u>Not Present</u>
<u>Activation time for DPCH</u>	
<u>Activation Time</u>	
<u>Radio bearer downlink ciphering activation time info</u>	
<u>Radio bearer activation time</u>	<u>2 RBs</u>
<u>RB identity₁</u>	<u>3</u>
<u>RLC sequence number₁</u>	<u>Current RLC SN + 2</u>
<u>RB identity₂</u>	<u>4</u>
<u>RLC sequence number₂</u>	<u>Current RLC SN + 2</u>

SECURITY MODE COMMAND (Step 4)

Information Element	Value/remark
Ciphering mode command	Start
~~Ciphering algorithm~~ Security capability	~~Standard UMTS Encryption Algorithm UEA1~~
Ciphering algorithm capability	0000000000000001B(UEA1)
~~Integrity protection algorithm capability~~	~~0000000000000001B(UEA1)~~
Activation time for DPCH	Not present
Activation time	Current CFN-[current CFN mod 8 + 8]
Radio bearer downlink ciphering activation time info	
Radio bearer activation time	2 RBs
RB identity ₁	23
RLC sequence number ₁	Current RLC SN+2
RB identity ₂	Current downlink RLC Sequence Number for RB3
RLC sequence number ₂	34
	Current RLC SN+2
	Current downlink RLC Sequence Number for RB4

8.1.7.5 Test requirement

After step 2 the UE shall transmit a SECURITY MODE FAILURE message to report protocol error detected in the earlier SECURITY MODE ~~CONTROL~~-COMMAND message. The UE shall be able to communicate normally with the SS, with all ~~user or~~ control data unciphered.

After step 4 the UE shall RLC-acknowledge the receipt of the SECURITY MODE ~~CONTROL~~-COMMAND message using unciphered mode. SS checks that the SECURITY MODE ~~CONTROL~~-COMPLETE message is received unciphered.

After step 5 SS verifies that downlink control data from RB 23 and RB 34 are ciphered using UEA1 algorithm, after the RLC sequence numbers as a downlink activation time stated in step 4 have elapsed. In the uplink direction, the UE shall start to cipher on the uplink after the RLC sequence number as an uplink activation time stated in step 5 has elapsed.

8.2.1.1 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success(Data integrity protection algorithm is not applied)

8.2.1.1.1 Definition

8.2.1.1.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

(This is the case where data integrity protection algorithm is not applied.)

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.1.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state, after the test operator is prompted to make an out-going call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1 including the start of tx/rx. This message requests the establishment of RABs for carrying the traffic of the speech call. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message do not contain IE "integrity check info" and "integrity protection mode info"
2		→	RADIO BEARER SETUP COMPLETE	This message do not contain "integrity check info" and "Uplink integrity activation info"
3				To confirm the communication.

Specific Message Contents

For RADIO BEARER SETUP in step 1, using the message sub-type indicated as "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in default message content clause.

8.2.1.1.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation.

8.2.1.2 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success(Effectuated Data integrity protection algorithm)

8.2.1.2.1 Definition

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8.2.1.2.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message, which applies data integrity function, and then communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1, 8.5.11.

8.2.1.2.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message which contains IE "Integrity check info" and IE "Integrity protection mode info" received from the SS.

8.2.1.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH and data integrity algorithm is not applied

Test Procedure

The UE is in the CELL_DCH state, after the test operator is prompted to make an out-going data call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message which is including IE "integrity check info" and "integrity protection mode info" to the UE after it sets up L1 including the start of tx/rx. This message requests the establishment of RABs for carrying the traffic of the call. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message which is including IE "integrity check info" using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message contain IE "integrity check info" and "integrity protection mode info"
2		→	RADIO BEARER SETUP COMPLETE	This message contain "integrity check info"
3				To confirm the communication.

Specific Message Contents

For RADIO BEARER SETUP in step 1, using the message sub-types indicated as "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in default message content clause.

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to identical message sub-type found in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
Integrity check info	
- Message authentication code	Bit string (32) MAC-I See TS33.102
- RRC Message sequence number	0
Integrity protection mode info	Present
- Integrity protection mode command	"Start"
- Downlink integrity protection activation info	Not present (It is needed only when the IE "Integrity protection mode command" has the value "modify" .)
- integrity protection algorithm	UMTS Integrity Algorithm UIA1 "0001 ₂ "; UIA1, Kasumi
- integrity protection initialisation number	Bit string (32) FRESH See TS33.102

RADIO BEARER SETUP COMPLETE

Information Element	Value/remark
Integrity check info	
- Message authentication code	Not checked (MAC-I See TS33.102)
- RRC Message sequence number	Not checked
Uplink Integrity protection activation info	Not checked
Hyper Frame Number	Not checked

8.2.1.2.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation. This can be verified by the correct reproduction of the u-plane data transmitted and received between the test operator and SS.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	1
- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	0
- SSST Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- TFCI combining indicator	TRUE
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	1
- SSST Indicator	FALSE
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	

- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- FACH/PCH information	
- TFS	(PCH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	(FACH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- References to system information blocks	Not Present
- Scheduling information	
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code
- PDSCH with SHO DCH info
- DSCH radio link identifier
- TFCI Combining set
- Radio link identifier
- Primary CPICH info
 - Primary scrambling code
- PDSCH code mapping
- Downlink DPCH info for each RL
- Primary CPICH usage for channel estimation
- Secondary CPICH info
 - Secondary scrambling code
 - channelisation code
- DL channelisation code
 - Secondary scrambling code
- Code number
- TPC combination index
- SSDT Cell Identity
- Closed loop timing adjustment mode
- Secondary CCPCH info
- Primary CPICH usage for channel estimation
- Secondary CPICH info
 - Secondary scrambling code
 - channelisation code
- Secondary scrambling code
- SSDT Indicator
- Spreading factor
- Code number
- Pilot symbol existence
- TFCI existence
- Fixed or Flexible Position
- Timing offset
- References to system information blocks
- Scheduling information

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEAl)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor	1
- Fixed or Flexible Position	inactive
- TFCI existence	FDD Measurement
- Number of bits for Pilot bits(SF=128,256)	62
- Downlink DPCH Offset Value	(Current CFN + (256 – TTI/10msec)) mod 256
- DPCH compressed mode info	8
-TGPSI	10
-TGPS Status Flg	5
- TGMP	15
- TGPRC	35
- TGCFN	35
- TGSN	Mode 1
- TGL1	Mode 1
- TGL2	DL
- TGD	F/2
- TGPL1	F/2
- TGPL2	
- RPP	
- ITPRM	
- UL/DL Mode	
- Downlink compressed mode method	
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

[illegible]

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	
Other information element	Not checked

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	Startup
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	(256+CFN-(CFN MOD 8 + 8))MOD 256 Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time info	Not Present (Used RLC-AM or RLC-UM)
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	

- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks	Not Present

- Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	~~Not Present (If ciphering is applied, this IE is needed)~~
- Ciphering mode command	~~startop~~
- Ciphering algorithm	~~Not Present (Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present (Used RLC-TM)~~
- Radio bearer downlink ciphering activation time info	~~Not Present (Used RLC-AM or RLC-UM)~~
- Radio bearer identity	5
- RLC sequence number	Current RLC SN+2
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
- Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
- Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
- Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Maximum allowed UL TX power	33dBm
- Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	~~Not Present (If ciphering is applied, this IE is needed)~~
- Ciphering mode command	~~start~~
- Ciphering algorithm	~~Not Present (Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present (Used RLC-TM)~~
- Radio bearer downlink ciphering activation time info	~~Not Present (Used RLC-AM or RLC-UM)~~
- Radio bearer identity	5
- RLC sequence number	Current RLC SN+2
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

[illegible]

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	~~Not Present (If ciphering is applied, this IE is needed)~~
- Ciphering mode command	~~Startop~~
- Ciphering algorithm	~~Not Present (Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present (Used RLC-TM)~~
- Radio bearer downlink ciphering activation time info	~~Not Present (Used RLC-AM or RLC-UM)~~
- Radio bearer identity	5
- RLC sequence number	Current RLC SN+2
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	~~Not Present (If ciphering is applied, this IE is needed)~~
- Ciphering mode command	~~Startop~~
- Ciphering algorithm	~~Not Present (Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present (Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present (Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	5
- RLC sequence number	Current RLC SN
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
- Transport channel identity	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info - DPCCH power offset	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB

- PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 100 Not Present Not Present Primary CPICH may be used Not Present

- DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(DTCH TM)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(DTCH TM)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

- MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present 1 DCH 4 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB

Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (single)
- Downlink DPCH power control information	Reference to TS34.108 clause 6.10 Parameter Set
- DPC mode	Flexible
- Spreading factor	TRUE
- Fixed or Flexible Position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	inactive
-TGPSI	FDD Measurement
-TGPS Status Flg	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	
- Uplink compressed mode method	

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	- No code change - A 2.0 1.0 - None - Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 - Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	- Not Present - Primary CPICH may be used - Not Present 1 - SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a - Not Present - Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information	Not Present

- Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~Stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	

-DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set - TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set - Not Present 0 (single) - Reference to TS34.108 clause 6.10 Parameter Set - Flexible - TRUE - Not Present 0 1 - inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code	- No code change - A 2.0 1.0 - None - Not Present - Not Present - Not Present 100 - Not Present - Not Present - Primary CPICH may be used - Not Present

- channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~Stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport	

channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Deleted DL TrCH information	3
- Transport channel identity	
Deleted DL TrCH information	4
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	2
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from•CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	4
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	3
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to reconfigure	(UM CCCH for RRC)
- RB identity	6
- PDCP info	Not Present
- RLC info	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	5
RB information to reconfigure	(TM BCCH for RRC)
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	7
RB information to reconfigure	Not Present
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	8
RB information to reconfigure	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	PCH
UL Transport channel information for all transport channels	2
- TFC subset - Allowed Transport Format combination	1
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information)	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info	1
- TGPSI	inactive
- TGPS Status Flg	FDD Measurement
- TGMP	62
- TGPRC	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	8
- TGSN	10
- TGL1	5
- TGL2	15
- TGD	35
- TGPL1	35
- TGPL2	Mode 1
- RPP	Mode 1
- ITPRM	DL
- UL/DL Mode	F/2
- Downlink compressed mode method	F/2
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPICH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from •CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Poll_Windows	1
- Downlink RLC mode	RACH
- In-sequence delivery	1
- Receiving window size	4
- Downlink RLC status info	5
- Timer_status_prohibit	1
- Timer_EPC	FACH
- Missing PU indicator	1
- RB mapping info	4
- Information for each multiplexing option	(AM DTCH)
- Number of RLC logical channels	4
- Uplink transport channel type	Not Present
- Transport channel identity	Not Present
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to reconfigure	
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	4
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	3
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to reconfigure	(UM CCCH for RRC)
- RB identity	6
- PDCP info	Not Present
- RLC info	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	5
RB information to reconfigure	(TM BCCH for RRC)
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	7
RB information to reconfigure	Not Present
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to reconfigure	1
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	8
RB information to reconfigure	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	PCH
UL Transport channel information for all transport channels	2
- TFC subset - Allowed Transport Format combination	1
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	150
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	Not Present Not Present
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256

- TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	- No code change - A 2.0 1.0 - None - Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 - Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	- Not Present - Primary CPICH may be used - Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	1 - SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present - Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Deleted DL TrCH Information	2
- Transport channel identity	
Deleted DL TrCH Information	3
- Transport channel identity	
Deleted DL TrCH Information	4
- Transport channel identity	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	- inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	- No code change - A 2.0 1.0 - None - Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	- Not Present - Primary CPICH may be used - Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	1 - SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a - Not Present - Not Present
	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH
RB information to be affected	1
- RB identity	3
- RB mapping info	(AM DCCH for NAS_DT Low priority)
- Information for each multiplexing option	3
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Deleted UL TrCH Information	2
- Transport channel identity	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	

- Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information	0 0 0dB
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
Deleted UL TrCH Information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Preaent
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addition information)	

- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH Information	0dB
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement

- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	
- Normal	Not Present
- TFCI Field 1 information(Explicit TFCS	

Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	
- Transport channel identity	2
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH Information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~stop~~
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to be affected	1
- RB identity	3
- RB mapping info	(AM DCCH for NAS_DT Low priority)
- Information for each multiplexing option	3
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	RACH
- Uplink transport channel type	1
- Transport channel identity	5
- Logical channel identity	1
- MAC logical channel priority	
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH Information - Transport channel identity	4
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info - Available Signature - Signature - Signature - Signature	0 1 2

- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present

- DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to

- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information	TS34.108 clause 6.10 Parameter Set.)
Added or Reconfigured UL TrCH information	0
- Transport channel identity - TFS	0
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	0dB
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
Added or Reconfigured UL TrCH information	1
- Transport channel identity - TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Reference to TS34.108 clause 6.10 Parameter Set
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH information	0
Added or Reconfigured DL TrCH information	0dB
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks	1
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor	0.00
- TFCI existence - Number of FBI bit - Puncturing Limit	Not Present
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE
	Not Present
	0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256
	8
	10
	5
	15
	35
	35
	Mode 1
	Mode 1
	DL
	F/2
	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info	No code change A 2.0 1.0 None Not Present Not Present Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	startop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	(256+CFN-(CFN MOD 8 + 8))MOD 256
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	0
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	1
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	2
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	3
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	4
- RLC sequence number	Current RLC SN+2
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	

- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	

- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6

- PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present (TM RLC) TRUE 1 DCH 4 1 Not Present 1 DCH 4 1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	4 (This IE is needed for 12.2 kbps and 10.2 kbps) (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.)
DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB Not Present
Deleted DL TrCH information Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00
- Transport channel identity	Not Present
- TFS	2
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE

- Number of FBI bit - Puncturing Limit	Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE 4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info	Not Present Not Present

- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	start
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	0
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	1
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	2
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	3
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	4
- RLC sequence number	Current RLC SN+2
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	

- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	

- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1

RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	

- TFCS addition information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCCCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	

- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	start
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	0
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	1
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	2
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	3
- RLC sequence number	Current RLC SN+2
- Radio bearer identity	4
- RLC sequence number	Current RLC SN+2
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	

- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	

- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1

RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition	

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0)

- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type	
Integrity check info	Not checked.
Uplink integrity protection activation info	Not checked.
Radio bearer uplink ciphering activation time info	<u>SS must follow the IE to cipher on each RB. Value should not be present unless otherwise stated.</u>
RB with PDCP information list	
- RB with PDCP information	Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 (TM RLC) TRUE 1 RACH 1 5 1 (UM CCCH for RRC) 6
Signalling RB information to setup - RB identity - CHOICE RLC info type - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM RLC) Max DAT retransmissions 4 1 FACH 1 5 (TM BCCH for RRC) 7
Signalling RB information to setup - RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM RLC) TRUE 1 FACH 1 6 (TM PCCH for RRC) 8
Signalling RB information to setup - RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM RLC) TRUE 1 FACH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information	1 (This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0
	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
PRACH info	Reference to TS34.108 clause 6.10 Parameter Set
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	2
	3
	4
	5
	6
	7
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	Reference to TS34.108 clause 6.10 Parameter Set

- Available Sub Channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present
- Primary CPICH info	
- Primary scrambling code	
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	
- DL Scrambling Code	
- Signalling Method	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	

- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~Stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	Not Present
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	

- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m - Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Maximum allowed UL TX power - Uplink DPCH info -Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit - Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~Stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	Not Present
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
 	0
- Gain factor information	0dB
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	-6dB
-DPCCCH Power offset	8slot
-PC Preamble	Algorithm1
-Power Control Algorithm	1dB
-TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bits	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~Stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set	100 Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~Stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	

- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1

- ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Primary CPICH may be used Not Present
- Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	

- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(~~If ciphering is applied, this IE is needed~~)
- Ciphering mode command	~~Stop~~
- Ciphering algorithm	~~Not Present(Standard UMTS Encryption Algorithm UEA1)~~
- Activation time for DPCH	~~Not Present(Used RLC-TM)~~
- Radio bearer downlink ciphering activation time	~~Not Present(Used RLC-AM or RLC-UM)~~
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	

- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1

- ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	150 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present
- Addition - TFCS addition	Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present (Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present (Used RLC TM)
- Radio bearer downlink ciphering activation time	Not Present (Used RLC AM or RLC UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

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Finland, Finland, 28-30 August 2000

Document **T1S000165**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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34.123-1 CR 013

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Addition of COUNTER CHECK procedure

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☒
C Functional modification of feature ☐
D Editorial modification ☐

Release:

Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

A new RRC procedure called Counter Check was added into the TS25.331, as proposed by CR-309r2 for V3.2.0. A test case was added into TS 34.123-1. 3 test scenarios: invalid message reception, COUNT-C match and COUNT-C mismatch were created to check this elementary procedure.

Clauses affected:

8.1.8 (New)

Other specs affected:

Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☐ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.1.8 Counter check

8.1.8.1 Definition

8.1.8.2 Conformance requirement

1. When the UE receives a COUNTER CHECK message that includes matched COUNT-C MSB values, the UE shall transmit a COUNTER CHECK RESPONSE message on the uplink DCCH and omitting “RB COUNT-C information” IE in this message.
2. When the UE receives a COUNTER CHECK message that includes any mismatched COUNT-C MSB values, the UE shall transmit a COUNTER CHECK RESPONSE message on the uplink DCCH and specifies the current COUNT-C information of the RAB(s) with mismatched values.

Reference

3GPP TS 25.331 clause 8.1.15

8.1.8.3 Test purpose

To confirm that the UE transmits a COUNTER CHECK RESPONSE message after it receives a COUNTER CHECK message from the SS. To confirm that the UE responds to the reception of an invalid downlink COUNTER CHECK message by transmitting a RRC STATUS message on the uplink DCCH, stating the correct error cause value in message.

8.1.8.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. The SS transmits an erroneous COUNTER CHECK message. The content of this message is a concatenation of the message type IE and an arbitrary 32-bits string. The UE shall detect a protocol error and send RRC STATUS message to report this event. Next, the SS transmits a COUNTER CHECK message that includes the current COUNT-C MSB information in each radio access bearer. The UE shall react by sending a COUNTER CHECK RESPONSE message on the uplink DCCH, which does not include “RB COUNT-C information” IE. The SS transmits a COUNTER CHECK message which includes the current COUNT-C MSB information reversed all the bits in each radio bearer. The UE shall send a COUNTER CHECK RESPONSE message on the uplink DCCH, specifying the current COUNT-C information for each radio access bearer established.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>				The UE is brought to CELL_DCH state after an outgoing call has been established successfully.
<u>2</u>		←	<u>COUNTER CHECK</u>	This message contains an arbitrary 32-bits pattern, following the IE "Message Type"
<u>3</u>		→	<u>RRC STATUS</u>	UE shall detect a protocol error and then transmit this message.
<u>4</u>		←	<u>COUNTER CHECK</u>	See specific message content.
<u>5</u>		→	<u>COUNTER CHECK RESPONSE</u>	The message shall not include the IE "RB COUNT-C information".
<u>6</u>		←	<u>COUNTER CHECK</u>	See specific message content.
<u>7</u>		→	<u>COUNTER CHECK RESPONSE</u>	The message shall include the IE "RB COUNT-C information".

Specific Message Contents

COUNTER CHECK (Step 2)

<u>Information Element</u>	<u>Value/remark</u>
<u>Unknown bit pattern</u>	An arbitrary 32-bits string

RRC STATUS (Step 3)

<u>Information Element</u>	<u>Value/remark</u>
<u>Protocol Error Information</u> - Protocol Error Cause	Checked to see if set to "ASN.1 violation or encoding" or "conditional information element error"

COUNTER CHECK (Step 4)

<u>Information Element</u>	<u>Value/remark</u>
Integrity check info RB COUNT-C MSB information - RB identity - COUNT-C MSB uplink - COUNT-C MSB downlink	Calculated value 5 Current COUNT-C MSB for RB#5 in uplink Current COUNT-C MSB for RB#5 in downlink

COUNTER CHECK RESPONSE (Step 5)

<u>Information Element</u>	<u>Value/remark</u>
Integrity check info RB COUNT-C information - RB identity - COUNT-C uplink - COUNT-C downlink	Not checked Check to if this IE is absent

COUNTER CHECK (Step 6)

<u>Information Element</u>	<u>Value/remark</u>
RB COUNT-C MSB information - RB identity - COUNT-C MSB uplink - COUNT-C MSB downlink	Check to see if set to 4 Toggle all bits of the current COUNT-C MSB in uplink for RB#5 Toggle all bits of the current COUNT-C MSB in downlink for RB#5

COUNTER CHECK RESPONSE (Step 7)

<u>Information Element</u>	<u>Value/remark</u>
Integrity check info RB COUNT-C information - RB identity - COUNT-C uplink - COUNT-C downlink	Not checked Check to see if set to 5 Check to see if set to Current COUNT-C for RB#5 in uplink Check to see if set to COUNT-C for RB#5 in downlink

8.1.8.5 Test requirement

After step 2, the UE shall transmit a RRC STATUS message on the uplink DCCH. The protocol error cause shall be set to “ASN.1 violation or encoding” or “conditional information element error”.

After step 4 the UE shall transmit a COUNTER CHECK RESPONSE message which does not includes the IE”RB COUNT-C information” to indicates that a matched comparison result is obtained.

After step 6, the UE shall transmit a COUNTER CHECK RESPONSE message which includes the IE”RB COUNT-C information” to report that a mismatch in COUNT-C value is detected in RB#5.

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Finland, Finland, 28-30 August 2000

Document **T1S000166**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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34.123-1 CR 014

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Updates to "RLC info" IE

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

In RRC CONNECTION SETUP message, RRC CONNECTION RE-ESTABLISHMENT message, RADIO BEARER SETUP message, RADIO BEARER RECONFIGURATION message and RADIO BEARER RELEASE message, "RLC info" IE was revised according to according to CR-296r3 for TS 25.331. 2 major changes were made to sub-IEs found in "RLC info":
1. Deleted IE "In-sequence delivery" when downlink UM or TM RBs are use.
2. Inserted IEs "Timer_MRW" and "MaxMRW" when uplink AM RB are used.

Clauses affected:

Annex A

Other specs affected:

- Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☒ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

CR-XXX to 34.108

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC Mode	TM RLC
- Downlink RLC mode	{TM RLC}
- In-sequence delivery	TRUE
- Segmentation indication	TRUE
- RB mapping info	

- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	0 0 0dB 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity	2

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL

- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	
- Normal	Not Present
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	

- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100

- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	

- Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c	

- Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible

- TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Timer_MRW	100
- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	

- Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c	Not Present

- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	2
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	0 (single)
- DPC mode	Reference to TS34.108 clause 6.10 Parameter Set
- Spreading factor	Flexible
- Fixed or Flexible Position	TRUE
- TFCI existence	

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Timer_MRW	100
- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	

- Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0
	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number)
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	3
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number)
- DCH quality target - BLER Quality value - Transparent mode signalling info	

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62

- TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	(Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Timer_MRW	100
- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	

- Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0
	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	3
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62

- TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	(Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(TM DTCH)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm

- DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set - TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) - Reference to TS34.108 clause 6.10 Parameter Set - Flexible - TRUE - Not Present 0 1 - inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	- No code change - A 2.0 1.0 - None - Not Present
Downlink PDSCH information CPCH SET info	- Not Present - Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code	100 100 - Not Present - Not Present - Primary CPICH may be used - Not Present

- channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(DTCH TM)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	(DTCH TM)
RB information to be affected	5
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	3
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	3
- Transport channel identity	1
- Logical channel identity	
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

- MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present 1 DCH 4 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	Not Present
- Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.)
	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
	0 0

- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS	Not Present

- Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
DRAC static information	
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	

-Uplink DPCH power control info -DPCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set - Not Present
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) - Reference to TS34.108 clause 6.10 Parameter Set Flexible - TRUE - Not Present 0 1 - inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	- No code change - A 2.0 1.0 - None - Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info	100 - Not Present - Not Present - Primary CPICH may be used - Not Present

- Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH information	3
- Transport channel identity	4
Deleted DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	
	Not Present
	Not Present
	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from •CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	4
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	3
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	TM RLC
- Downlink RLC mode	TM RLC
- In-sequence delivery	TRUE
- Segmentation indication	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to reconfigure	(UM CCCH for RRC)
- RB identity	6
- PDCP info	Not Present

- RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In sequence delivery~~ - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present <u>UM RLC</u> ~~TRUE~~
RB information to reconfigure - RB identity - PDCP info - RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In sequence delivery~~ - <u>Segmentation indication</u> - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7 Not Present
- RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In sequence delivery~~ - <u>Segmentation indication</u> - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present <u>TM RLC</u> ~~TRUE~~ <u>TRUE</u>
RB information to reconfigure - RB identity - PDCP info - RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In sequence delivery~~ - <u>Segmentation indication</u> - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) 8 Not Present
- RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In sequence delivery~~ - <u>Segmentation indication</u> - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present <u>TM RLC</u> ~~TRUE~~ <u>TRUE</u>
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1 Not Present
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	

- DPC mode	1
- Spreading factor	inactive
- Fixed or Flexible Position	FDD Measurement
- TFCI existence	62
- Number of bits for Pilot bits(SF=128,256)	(Current CFN + (256 – TTI/10msec)) mod 256
- Downlink DPCH Offset Value	8
- DPCH compressed mode info	10
-TGPSI	5
-TGPS Status Flg	15
- TGMP	35
- TGPRC	35
- TGCFN	Mode 1
- TGSN	Mode 1
- TGL1	DL
- TGL2	F/2
- TGD	F/2
- TGPL1	
- TGPL2	
- RPP	
- ITPRM	
- UL/DL Mode	
- Downlink compressed mode method	
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1 FALSE

- Spreading factor - Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	TRUE Flexible 0 Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from •CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	4
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	3
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	<u>TM RLC</u>
- Downlink RLC mode	<u>Not Present</u>
- In-sequence delivery	<u>TRUE</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to reconfigure	(UM CCCH for RRC)
- RB identity	6
- PDCP info	Not Present

- RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In-sequence delivery~~ - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present <u>RLC UM</u> ~~TRUE~~
RB information to reconfigure - RB identity - PDCP info - RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In-sequence delivery~~ - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7 Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In-sequence delivery~~ - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present <u>RLC TM</u> ~~TRUE~~
RB information to reconfigure - RB identity - PDCP info - RLC info - <u>Uplink RLC mode</u> - Downlink RLC mode - ~~In-sequence delivery~~ - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8 Not Present
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present <u>RLC TM</u> ~~TRUE~~
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 PCH 2 1 Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity	Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	

- DPC mode	1
- Spreading factor	inactive
- Fixed or Flexible Position	FDD Measurement
- TFCI existence	62
- Number of bits for Pilot bits(SF=128,256)	(Current CFN + (256 – TTI/10msec)) mod 256
- Downlink DPCH Offset Value	8
- DPCH compressed mode info	10
-TGPSI	5
-TGPS Status Flg	15
- TGMP	35
- TGPRC	35
- TGCFN	Mode 1
- TGSN	Mode 1
- TGL1	DL
- TGL2	F/2
- TGD	F/2
- TGPL1	
- TGPL2	
- RPP	
- ITPRM	
- UL/DL Mode	
- Downlink compressed mode method	
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	150
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1 FALSE

- Spreading factor - Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62

- TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	(Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

[illegible]

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH Information - Transport channel identity Added or Reconfigured UL TrCH information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent Not Present
- CTFC information - CTFC	

- Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	0.00 Not Present
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN	Reference to TS34.108 clause 6.10 Parameter Set 33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256

- TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
Configuration)	
- Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	(This IE is repeated for TFC number.)
Deleted DL TrCH Information	
- Transport channel identity	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Added or Reconfigured DL TrCH information	4
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	
- Transport channel identity	2
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information	Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature - Signature - Signature	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 4 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm 0 1

- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100

- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{UM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Downlink RLC mode	{UM RLC}
~~In-sequence delivery~~	~~TRUE~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	

- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	TM RLC
- Downlink RLC mode	{TM RLC}
- In-sequence delivery	TRUE
- Segmentation indication	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)

- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)

- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info	No code change A 2.0 1.0 None Not Present Not Present Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{UM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Downlink RLC mode	{UM RLC}
- In sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4

- Polling info	200
- Timer_poll_prohibit	200
- Timer_poll	1
- Poll_SDU	TRUE
- Last transmission PU poll	TRUE
- Last retransmission PU poll	100
- Poll_Windows	{AM RLC}
- Downlink RLC mode	TRUE
- In-sequence delivery	8
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100
- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100

- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- <u>Uplink RLC mode</u>	<u>TM RLC</u>
- Downlink RLC mode	{TM RLC}
- <u>In-sequence delivery</u>	<u>TRUE</u>
- <u>Segmentation indication</u>	<u>TRUE</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	<u>Not Present</u>
- <u>Uplink RLC mode</u>	<u>TM RLC</u>
- Downlink RLC mode	{TM RLC}
- <u>In-sequence delivery</u>	<u>TRUE</u>
- <u>Segmentation indication</u>	<u>TRUE</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)

- RB identity	6
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	TM RLC
- Downlink RLC mode	{TM RLC}
~~In-sequence delivery~~ Segmentation indication	~~TRUE~~ TRUE
- RB mapping info	1
- Information for each multiplexing option	DCH
- Number of RLC logical channels	4
- Uplink transport channel type	1
- Transport channel identity	Not Present
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addition information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Reference to TS34.108 clause 6.10 Parameter Set
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addition information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Reference to TS34.108 clause 6.10 Parameter Set
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Reference to TS34.108 clause 6.10 Parameter Set
Deleted DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)

- Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE 4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0
- TPC combination index	0

- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{UM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Downlink RLC mode	{UM RLC}
- ~~In-sequence delivery~~	~~TRUE~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500

- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH

- Transport channel identity - Logical channel identity	2
RB information to release	1
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted UL TrCH information	0
Added or Reconfigured UL TrCH information	0dB
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
Added or Reconfigured UL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
	Not Present

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH information	0
Added or Reconfigured DL TrCH information	0dB
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0.00
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0.00
Added or Reconfigured DL TrCH information	Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	33dBm
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH	-6dB
Uplink DPCH info	8slot
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH	Algorithm1
Uplink DPCH info	1dB
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH	Long
Uplink DPCH info	0 (0 to 16777215)
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH	Not Present(1)

- spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a

- Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{UM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Downlink RLC mode	{UM RLC}
- ~~In-sequence delivery~~	~~TRUE~~
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500

- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH

- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1)

- spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a

- Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCH existence - Fixed or Flexible Position - Timing offset - TFCH - Normal - TFCH Field 1 information(Explicit TFCH Configuration) - Addition - TFCH addition	Not Present Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{UM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Downlink RLC mode	{UM RLC}
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	<u>100</u>
- MaxMRW	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{AM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- <u>Timer_MRW</u>	<u>100</u>
- <u>MaxMRW</u>	<u>4</u>
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	{AM RLC}
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH

- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)
- RB identity	5
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	TM RLC
- Downlink RLC mode	(TM RLC) Not Present
~~In-sequence delivery~~ Segmentation indication	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
Signalling RB information to setup	(UM CCCH for RRC)
- RB identity	6
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	{UM RLC}
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100
- MaxMRW	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
Signalling RB information to setup	(TM BCCH for RRC)
- RB identity	7
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	Not Present
- Downlink RLC mode	{TM RLC}
~~In-sequence delivery~~ Segmentation indication	TRUE TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
Signalling RB information to setup	(TM PCCH for RRC)
- RB identity	8
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	Not Present
- Downlink RLC mode	{TM RLC}
~~In-sequence delivery~~ Segmentation indication	TRUE TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm

PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present

3GPP/TSG T1/SIG Meeting#12
Naantali, Finland, 28-30 August 2000

Document **T1S000167**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
34.123-1 CR 015		Current Version: 3.0.0	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: T#9 list expected approval meeting # here ↑	for approval ☒ for information ☐	strategic ☐ non-strategic ☐	(for SMG use only)
Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: http://ftp.3gpp.org/Information/CR-Form-v2.doc			

Proposed change affects: (U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐
(at least one should be marked with an X)

Source: Matsushita Communication Industry Co.,Ltd **Date:** 28/08/2000

Subject: Updates to "DPCH Compressed Mode Info" IE

Work item:

Category:	F Correction	☐	Release:	Phase 2	☐
(only one category shall be marked with an X)	A Corresponds to a correction in an earlier release	☐		Release 96	☐
	B Addition of feature	☐		Release 97	☐
	C Functional modification of feature	☒		Release 98	☐
	D Editorial modification	☐		Release 99	☒
				Release 00	☐

Reason for change:

In CR-228r5 for TS 25.331 V3.2.0, "DeltaSIR2" and "DeltaSIRafter2" IEs were added to "DPCH Compressed Mode Info". These IEs specify the Δ SIR target values to be applied during the compressed frames corresponding to the second transmission gap in the transmission gap pattern. The affected clauses in TS 34.123-1 V3.0.0 were changed accordingly. Some editorial errors were found in 8.4.1.2, 8.4.1.6 and 8.4.1.8 and then corrected. Several IEs in Annex A were found to have missing values. Suitable values were assigned to these IEs.

In CR-307r3 for TS 25.331 V3.2.0, "Scrambling Code Change" IE was removed from "DPCH Compressed Mode Info" IE. This is because scrambling code change mechanism is applied individually for each radio link. However, "DPCH Compressed Mode Info" IE is common to all radio links. In the same CR, TGPS L1 configuration parameters were made optional by encapsulating them into a simple structure called "Transmission gap pattern sequence configuration parameters". Annex A was updated so as to align to these modifications in RRC core specification.

In CR-410r1 for TS 25.331 V3.2.0, 2 proposals were made:

1. Addition of "DPCH compressed mode info status" IE into MEASUREMENT CONTROL message. This IE can be used activate/de-activate compressed mode pattern sequences, which are used to effect inter-frequency/inter-system measurements.
2. Addition of "Scrambling Code Change" IE into "Downlink DPCH info for each RL" IE.

All affected messages under clause 8.4.1.X and Annex A were revised according to the changes. In clause 8.4.1.8, test steps 6 to 11 were inserted to check the new condition introduced in item 1 above.

Clauses affected: 8.3.4.1, 8.3.4.3, 8.3.4.5, 8.3.4.6, 8.4.1.X, Annex A

<u>Other specs</u> <u>Affected:</u>	Other 3G core specifications		→ List of CRs:	CR-XXX to 34.108
	Other GSM core specifications		→ List of CRs:	
	MS test specifications	X	→ List of CRs:	
	BSS test specifications		→ List of CRs:	
	O&M specifications		→ List of CRs:	

Other
comments:



<----- double-click here for help and instructions on how to create a CR.

8.3.4.1 Active set update in soft handover: Radio Link addition

8.3.4.1.1 Definition

8.3.4.1.2 Conformance requirement

Radio link addition is triggered in the network's RRC layer. The RRC entity in the network first configures the new radio link. Transmission and reception then begin immediately. This procedure is to update the active set of the connection between the UE and UTRAN. The UTRAN then transmits an ACTIVE SET UPDATE message to the UE. The UE configures layer 1 to begin reception for the additional radio link. After the UE receives confirmation from the physical layer in the UE, an ACTIVE SET UPDATE COMPLETE message is sent to the UTRAN.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.1.3 Test purpose

To confirm that the UE continues to communicate with the SS on both the additional radio link and an already existing radio link after the radio link addition.

8.3.4.1.4 Method of test

Initial Condition

System Simulator : 2cells - Cell 1 is active ,Cell 2 is active

UE : CELL_DCH in cell 1

Test Procedure

Initially, the UE establishes a radio access bearer in the CELL_DCH state in cell 1. The SS begins to configure the new radio link to be added from cell 2. Then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information".(e.g.Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID). When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. After the UE confirms the synchronization with the new radio link from cell 2, the UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The UE continues to communicate with the SS on the both radio links. To test this condition, SS ceases the operations of all uplink and downlink DPCH from cell 1. SS shall observe that the data communication for both DCCH and DTCH channels continue as per normal using cell 2, as if cell 1 is still operational.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state in cell 1, after the successful establishment of a radio access bearer service.
2				The SS configures an additional radio link in the downlink direction from cell 2.
3		←	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE" Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1. SS ceases all Tx and Rx activities in cell 1. But it shall be able to communicate with UE through cell 2.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- CHOICE Spreading factor	512
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	Not Present

8.3.4.1.5

Test requirement

After step 3 the UE shall configure a new radio link to cell.2, with the connection on the old radio link in cell 1 remaining operational and unaffected. It shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 4 the SS shall continue to communicate with the UE using the radio links added to the UE from cell 2.

8.3.4.3 Active set update in soft handover: Combined radio link addition and removal (active set is not full)

8.3.4.3.1 Definition

8.3.4.3.2 Conformance requirement

When radio links are to be replaced, the UTRAN RRC first configures the UTRAN L1 to activate the radio link(s) that are being added. The UTRAN RRC then transmits an ACTIVE SET UPDATE message to the UE RRC, which shall configure the UE L1 to terminate transmission and reception on the removed radio link(s) and begin transmission and reception on the added radio link(s). At the completion of the reconfiguration of radio links, the UE shall acknowledge the replacement with an ACTIVE SET UPDATE COMPLETE message.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.3.3 Test purpose

To confirm that the UE continues to communicate with the SS on the added radio link and removes radio link which exists prior to the execution of active set update procedure.

8.3.4.3.4 Method of test

Initial Condition

System Simulator : 2cells- Both Cell 1 and Cell 2 are active

UE :CELL_DCH in cell 1 [Active set is not full.]

Test Procedure

The UE establishes a radio access bearer in the CELL_DCH state in cell 1. SS begin to configure the new radio link in cell 2. Then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC. The message includes IE" Radio Link Addition Information". and IE" Radio Link Removal Information", indicating the removal of cell 1 and addition of cell 2 into the active set. When the UE receives this message, the UE RRC shall terminate the transmission and reception of the removed radio link in cell 1 and then configures layer 1 to begin transmission and reception in cell 2. After the UE received confirmations from the physical layer regarding the update of active set, it transmits an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH to the SS. The UE shall continue to communicate with the SS on the added radio link in cell 2. When SS receives ACTIVE SET UPDATE COMPLETE message, it verifies that the UE has ceased any uplink transmission in cell 1.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in cell 1
2				The SS configures an additional radio link in cell 2, starting the transmission and reception of data in cell 2. Clause
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE" Radio Link Addition Information" for cell 2 and IE" Radio Link Removal Information" for cell 1.
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link in cell 2 and removes the old radio link in cell 1.
5				The SS removes the radio link from cell 1 and the UE shall continue to communicate on the added radio link in cell 2, and not transmit any data in cell 1.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - DL channelisation code - Secondary scrambling code - CHOICE Spreading factor - Code Number	Set to same code as assigned for cell 2 P-CPICH can be used. Not Present This IE is repeated for all existing downlink DPCHs allocated to the UE Not Present 512 For each DPCH, assign the same code number in the current code given in cell 2. <u>Not Present</u>
- Scrambling code change - TPC Combination Index - SSDT Cell Identity - Close loop timing adjustment mode - TFCI Combining Indicator - Secondary CCPCH Info - TFCS - FACH/PCH Information - Reference to other system information blocks	Not Present Not Present Not Present Not Present Not Present Not Present Not Present Not Present
Radio link removal information - Primary CPICH Info - Primary Scrambling Code	Set to same code assigned as for cell 1

8.3.4.3.5 Test requirement

After step 3 the UE shall remove the radio link in cell 1 and add the radio link in cell 2. Then the UE shall transmit an ACTIVE SET UPDATE COMPLETE message the uplink DCCH.

After step 4 the UE shall continue to communicate on the added radio link in cell 2. SS monitors the uplink direction to confirm that no data are designated for reception in cell 1.

8.3.4.5 Active set update in soft handover: Combined radio link addition and removal (active set is full)

8.3.4.5.1 Definition

8.3.4.5.2 Conformance requirement

When the UE active set is full, the UE shall first remove the old radio link and then add the new radio link, after it receives an ACTIVE SET UPDATE message for the combined radio link addition and removal.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.5.3 Test purpose

To confirm that the UE removes one of existing radio links, which is indicated in an ACTIVE SET UPDATE message and continues to communicate on the added radio link.

8.3.4.5.4 Method of test

Initial Condition

System Simulator : 3 cells - Cell 1 , Cell 2, and Cell 3 are all active

UE :CELL_DCH in cell 1, cell 2 (The assumed maximum number for active set is 2.)

[Editor's Note] The maximum number of radio link (i.e. MaxRL) specified in CR328 of TS 25.331 is 8. However, if the UE capability is more inferior in this aspect, can the assumption above still stands?

Test Procedure

The UE establishes a radio access bearer in the CELL_DCH state in cell 1 and cell 2. The SS configures the new radio link in cell 3 and sends an ACTIVE SET UPDATE message on DCCH using AM. This message includes IE" Radio Link Addition Information" indicating cell 3 to be added into the active set, and IE" Radio Link Removal Information" indicating the removal of cell 1 from the active set. When the UE receives this message, it shall not report a failure but firstly removes the indicated radio link and then adds the new radio link. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message on the DCCH using AM RLC to the SS and continues to communicate with the SS on the added radio link and the remaining old radio link.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in cell 1 and cell 2.
2				The SS configures an additional radio link in for cell 3, and starts reception and transmission using cell 3.
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE" Radio Link Addition Information" and IE" Radio Link Removal Information". The contents of the IE dictate the addition of cell 3 into the active set and removal of cell 1 from it.
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link in cell 3 and removes the old radio link in cell 1.
5				The SS removes the radio link in cell 1. The UE shall continue to communicate on the added radio link in cell 3 and also the existing radio link in cell 2.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test case is identical to the same message sub-type found in TS 34.108 Clause 8clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 3
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
	Not Present
- Secondary scrambling code	512
- CHOICE Spreading factor	For each DPCH, assign the same code number in the current code given in cell3.
- Code Number	Not Present
- <u>Scrambling code change</u>	Not Present
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code assigned as for cell 1

8.3.4.5.5 Test requirement

After step 3 the UE shall remove the radio link in cell 1 and add the radio link in cell 3. Then the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 4 the UE shall continue to communicate on the added radio link in cell 3 and on the existing old radio link in cell 2. It shall cease all transmission to cell 1.

8.3.4.6 Active set update in soft handover: Incompatible simultaneous reconfiguration

8.3.4.6.1 Definition

8.3.4.6.2 Conformance Requirements

The UE shall keep its old configuration, when it receives an ACTIVE SET UPDATE message before it can complete an existing active set update procedure. The UE shall then transmit an RRC STATUS message on the DCCH using AM RLC with value "Message not compatible with receiver state" set in IE "Protocol error cause". Then the UE shall continue to update its active set as if the second ACTIVE SET UPDATE message has not been received.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.6.3 Test Purpose

To confirm that the UE resumes the prior active set update request, when it receives a subsequent ACTIVE SET UPDATE before it has completely executed the first update procedure. To confirm that the UE transmits a RRC STATUS message to report the detection of "incompatible simultaneous reconfiguration" condition.

Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active

UE : CELL_DCH in cell 1 and cell 2

8.3.4.6.4 Test Procedure

The UE establishes a radio access bearer in CELL_DCH state in cell 1 and cell 2. SS transmits an ACTIVE SET UPDATE message to request for the removal of cell 1 from the active list. When the UE sends an acknowledgement for this message from its RLC entity, SS immediately transmits a second ACTIVE SET UPDATE message, which specifies that cell 1 to be added into the active list. The UE shall react by transmitting RRC STATUS message on the DCCH using AM-RLC mode. In this message, the IE "Protocol error cause" shall be set to "Message not compatible with receiver state". Subsequently, the UE shall transmit the ACTIVE SET UPDATE COMPLETE message when the reconfiguration from the earlier active set update is completed. When SS receives this message, it verifies that UE continues to communicate with the SS on the radio link in cell 2.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in both cell 1 and cell 2.
2		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC, requesting for cell 1 to be removed from the active set.
3		←	ACTIVE SET UPDATE	Immediately after UE acknowledges the message in step 2, SS transmits this message. This message specifies that cell 1 be added into the active set.
4		→	RRC STATUS	UE shall transmit this message with the IE "Protocol Error Cause" set to "Message not compatible with receiver state"
5		→	ACTIVE SET UPDATE COMPLETE	UE shall transmit this message to signal the completion of the active set update.
6				UE shall cease all communication with cell 1 and continue to communicate with cell 2 only.

Specific Message Contents

ACTIVE SET UPDATE (Step 2)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	Not Present.
Radio link removal information	
- Primary CPICH info	
- Primary scrambling code	Set to the P-CPICH scrambling code assigned to cell 1.

ACTIVE SET UPDATE (Step 3)

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 1
- Primary Scrambling Code	
- Downlink DPCH info for each RL	P-CPICH can be used.
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	This IE is repeated for all existing downlink DPCHs allocated to the UE
- DL channelisation code	Not Present
- Secondary scrambling code	512
- CHOICE Spreading Factor	For each DPCH, assign the same code number in the current code given in cell 1.
- Code Number	Not Present
- Scrambling code change	Not Present
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	Not Present

RRC STATUS

Information Element	Value/remark
Protocol Error Cause	Check if it's set to 'Message not compatible with receiver state'

8.3.4.6.5 Test Requirement

After step 3 the UE shall report the “incompatible simultaneous reconfiguration” error by transmitting RRC STATUS message on the DCCH. In this message, the value “Message not compatible with receiver state” shall be set in IE “Protocol error cause”.

After step 4 the UE shall transmit ACTIVE SET UPDATE COMPLETE message on the uplink DCCH of cell 2.

After step 5 the UE shall continue to communicate normally with the SS using the radio link from cell 2.

8.4.1.1 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.1.1 Definition

8.4.1.1.2 Conformance requirement

After a state transition from idle mode to CELL_DCH state, the UE shall continue to monitor the list of neighbouring cells which is specified in the SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages on BCCH. The UE shall send a MEASUREMENT REPORT message when reporting criteria are satisfied. During CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, it shall terminate existing monitoring activities for the neighbouring cells previously known from SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages. It shall perform the measurement and reporting tasks based on the latest MEASUREMENT CONTROL message received.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.1.3 Test Purpose

To confirm that the UE continue to monitor CPICH RSCP measurement quantity of the neighbour cells after it has entered the CELL_DCH state from idle mode. When the criteria specified in BCCH have been met, it

shall report the measurements to the SS using MEASUREMENT REPORT messages. To confirm that in CELL_DCH state, the UE respond to a modification of measurement criteria and adjust its measurement and reporting mechanism accordingly. To confirm that the UE terminates monitoring and measurement activities for the neighbour cells found in SYSTEM INFORMATION BLOCK TYPE 11 (or 12) message, after it has received a MEASUREMENT CONTROL message which specifies the measurement type to be “intra-frequency measurement”. To confirm that the UE restart the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.

8.4.1.1.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and the downlink P-CPICH has a transmission level (RSCP) of – 40 dBm, cell 2 is also active but with a P-CPICH transmission power 10dB below cell 1.

UE : idle state after having successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 11 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = “intra-frequency measurement”, measurement quantity = “CPICH RSCP”, report criteria = “periodic reporting criteria”, reporting interval = “12 seconds”.

SS pages the UE with the cause “Incoming circuit-switched call”. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates uplink and downlink DPDCH physical resources to the UE. UE then moves to CELL_DCH state. After approximately 12 seconds, the UE shall transmit a MEASUREMENT REPORT message with measurement readings from cell 2. SS waits for 25 seconds after the sending of RRC CONNECTION SETUP message to verify that 2 consecutive MEASUREMENT REPORT messages are received.

Then SS modifies the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages. The measurement parameters for cell 2 are changed in the following manner: report criteria = “event-trigger”, event identity = “1f”, reporting threshold = “-65 dBm”. SS then begins to decrease the transmission power of P-CPICH in cell 2 progressively at the rate of 0.5dB/sec. SS checks to see that no MEASUREMENT REPORT messages are sent within the next 12 seconds (which is due to periodic reporting). The UE shall detect this change and discontinue the periodic reporting of RSCP value estimation from cell 2. After approximately 35 seconds later, the UE shall transmit MEASUREMENT REPORT message to indicate that the RSCP of cell 2 has reached the threshold specified. In this message, the correct measurement identity shall be stated. Finally, SS sends a MEASUREMENT CONTROL message to request a periodic reporting of measurement quantity P-CPICH Ec/No from cell 2. The reporting interval is set to 32 seconds. Within the MEASUREMENT CONTROL message, a new measurement identity is assigned. After receiving this message, the UE shall stop reporting quantity P-CPICH RSCP of cell 2. Moreover, the UE shall start to transmit MEASUREMENT REPORT messages with the contents pertaining to new measurement identity on cell 2's P-CPICH Ec/No.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 11	The UE is idle mode and camped onto cell 1. Cell 2 is also active but the P-CPICH has a RSCP 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		→	RRC CONNECTION SETUP	SS allocates DPCH physical channels to UE

5	→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_DCH state.
6	→	MEASUREMENT REPORT	SS waits for 25 seconds. It shall receive 2 consecutive MEASUREMENT REPORT messages
7	←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	SS modifies the contents of system information, so that measurement for cell 2 is changed to "event trigger" with "event identity" set to 1f. SS then reduces the transmission power of cell 2's P-CPICH progressively by 0.5dB/sec.
8			SS monitors the DCCH for the next 12 seconds to make sure that no further MEASUREMENT REPORT messages are transmitted.
9	→	MEASUREMENT REPORT	UE shall transmit this message approximately 35 seconds after step 7, as its internal estimation of the RSCP of cell 2 has dropped below the threshold.
10	←	MEASUREMENT CONTROL	A new measurement identity is assigned, with the reporting quantity changed to cell 2's P-CPICH Ec/No
11	→	MEASUREMENT REPORT	SS verifies that UE transmits MEASUREMENT REPORT messages periodically to report the P-CPICH Ec/No value of cell 2.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 11 (Step 1)

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	1
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-115dB
- Qrxlevmin	-20dB
- Intra-frequency measurement quantity	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity	
- Intra-frequency measurement for RACH reporting	No report
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	
- Reporting information for state CELL_DCH	No report

Information Element	Value/Remark
- Intra-frequency reporting quantity	FALSE
- Reporting quantities for active set cells	FALSE
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	
- Pathloss	No report
- CFN-SFN observed time difference	TRUE
- Reporting quantities for monitored set cells	FALSE
- SFN-SFN observed time difference	TRUE
- Cell identity	
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	Not present
- CFN-SFN observed time difference	Periodical reporting criteria
- Reporting quantities for unlisted cells	Infinity
- CHOICE report criteria	12 seconds
- Amount of reporting	Not present
- Reporting interval	
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content, which is marked as "Transition to CELL_DCH".

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 1
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if within acceptable range
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MASTER INFORMATION BLOCK (Step 7)

Information Element	Value/Remarks
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 12 (Step 7)

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	2
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	FALSE
- CPICH Ec/No	TRUE
- CPICH RSCP	
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	Event type 1f
- Triggering condition	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- W	Not present
- Hysteresis	0.5dB
- Threshold Used Frequency	-65dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present-65dBm
- Reporting Threshold	0
- Time to trigger	Infinity
- Amount of reporting	8 seconds
- Reporting Interval	Not Present
- Reporting Cell Status	Not present

- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 2
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if this is below threshold value specified
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- Intra-frequency event identity	Check to see if this is set to event '1f'
- Cell measured event results	
- Primary CPICH Info	
- Primary scrambling code	Check to see if it's set to cell 2's assigned scrambling code

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	Same as in default message content
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 11)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 3
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

8.4.1.1.5 Test Requirement

After step 5 the UE shall start to transmit MEASUREMENT REPORT message. The measurement quantity "CPICH RSCP" shall be reported to the SS at 12 seconds interval.

After step 7 UE shall not transmit any MEASUREMENT REPORT messages within 12 seconds after SS has modified the MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages.

The UE shall transmit a MEASUREMENT REPORT message roughly 35 seconds after step 7, to report that the RSCP value for cell 2 has dropped below the threshold.

After step 10 the UE shall transmit MEASUREMENT REPORT messages at 32 seconds interval, with the IE "Measurement Identity" set to 3. The message shall also include an estimation of cell 2's P-CPICH Ec/No value.

8.4.1.2 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.2.1 Definition

8.4.1.2.2 Conformance requirement

After entering CELL_DCH state from idle mode, the UE shall discontinue the monitoring of the list of neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages on BCCH.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.2.3 Test Purpose

To confirm that the UE terminates the monitoring of the list of neighbouring cell assigned in the IE "inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, after it enters CELL_DCH state from idle mode.

8.4.1.2.4 Method of test

Initial Condition

System Simulator:- 2 cells – Cell 1 is active and has a downlink transmission level (CPICH RSCP) of –50 dBm, cell 2 is also active but with a transmission power 20dB below cell 1. The carrier frequency of cell 2 in the uplink direction is 1 UARFCN above that of cell 1, and the downlink carrier is 1 UARFCN below that of cell 1.

UE:- idle state ~~by has successfully and~~ camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM INFORMATION BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference, and also to include cell 2 into the monitored neighbour cells list. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH RSCP".

SS pages the UE with the cause "Incoming circuit-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates uplink and downlink ~~DDCH~~ dedicated physical resources to the UE. UE then moves to CELL_DCH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from cells belonging to the monitored set.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 20dB below that of cell 1. SYSTEM INFORMATION BLOCK TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		→	RRC CONNECTION SETUP	SS allocates ~~DPDCH~~ dedicated physical channels to UE, using compressed mode format
5		→	RRC CONNECTION <u>SETUP</u> COMPLETE	UE transmits this message to acknowledge the RRC CONNECTION SETUP message and moves to CELL_DCH state.
6				SS raises the transmission power of cell 2 by 10dB. SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	Not Present
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	Set to the next uplink UARFCN after cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20 dB, -115dBm
- Inter-frequency measurement quantity	Inter-frequency reporting criteria
CHOICE Reporting criteria	0
- Filter coefficient	CPICH RSCP
- Measurement quantity for frequency quality estimate	
- Inter-frequency measurement reporting criteria	2c
- Parameters required for each event	Not Present
- Inter-frequency event identity	Not Present
- Threshold used frequency	2.0dB
- W used frequency	0 sec
- Hysteresis	Infinity
- Time to trigger	0
- Amount of reporting	Not Present
- Reporting interval	
- Parameters required for each non used frequency	-55dBm
- Threshold non-used frequency	0
- W non-used frequency	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content which is marked as “Transition to CELL_DCH”, with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ~~ITPRMITP~~	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	~~Not Present~~
- Uplink compressed mode method	~~No code change~~
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	<u>Not Present</u>
- TX Diversity Mode	<u>None</u>
- SSDT information	<u>Not Present</u>
- S field	
- Code Word Set	

8.4.1.2.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity from cell 2.

8.4.1.3 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

During a transition from idle mode to CELL_FACH state, the UE shall start to monitor neighbouring cells listed in the IE “Intra-frequency cell info” received in SYSTEM INFORMATION BLOCK TYPE 12 (or 11). If a measurement report criteria is also specified, the UE shall store this information and apply these rules when deciding to transmit MEASUREMENT REPORT messages during a subsequent transition to CELL_DCH state. If reporting during RACH transmissions are dictated by the UTRAN, the UE shall append the relevant measurement information when sending messages on RACH (e.g. RRC CONNECTION REQUEST and CELL UPDATE).

Reference

3GPP TS 25.331, clause 8.4.1.9

8.4.1.3.3 Test Purpose

To confirm that the UE begins to monitor the neighbouring cells in the monitored list after it has entered the CELL_FACH state. The list of neighbouring cell can be known from SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages. If information regarding the intra-frequency measurement report criteria is also broadcasted, the UE shall save this information and apply the criteria during a subsequent transition to CELL_DCH state. If RACH measurement reporting is dictated in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, the UE shall include these measurements when transmitting on the RACH channel.

8.4.1.3.4 Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active. Cell 2 is transmitting at 15 dB below cell 1.

UE : idle state and camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = "intra-frequency measurement", measurement quantity = "CPICH Ec/No", report criteria = "periodic reporting criteria", reporting interval = "12 seconds". In the system information message, reporting of CPICH Ec/No is also required for intra-frequency reporting when transmitting RACH messages to cell 1.

SS pages the UE with the cause "Incoming packet-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH (FACH) physical channels for uplink and downlink use. UE shall then enter CELL_FACH state. SS waits until timer T305 expires, the UE shall send a CELL UPDATE message including the measurement reading of cell 2's CPICH Ec/No values. SS then reply with CELL UPDATE CONFIRM message without changing the physical channel resources.

In the next sequence, SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates DPDCH channels to the UE. The UE shall transit to CELL_DCH state and send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcasted on SYSTEM INFORMATION BLOCK TYPE 12 (or 11) when the UE was still in idle mode.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 2, SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 15dB below that of cell 1. SYSTEM INFORMATION TYPE 2 and 12 to be transmitted are different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE, stating the cause as an incoming packet-switched call.
3		→	RRC CONNECTION REQUEST	The Ec/No value of P-CPICH of Cell 1 should be reported.
4		←	RRC CONNECTION SETUP	SS allocates common physical channels to UE.

5	→	RRC CONNECTION COMPLETE	UE shall enter CELL_FACH state, transmits this message to acknowledge the SETUP message.
6			SS waits for 5 minutes (for the expiry of T305 timer), so that UE will initiate a periodic cell updating procedure.
7	→	CELL UPDATE	This message shall contain measurement readings of CPICH Ec/No for cell 1.
8	←	CELL UPDATE CONFIRM	SS does not change the physical channel allocation.
9	←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns DPCH physical resources to the UE, but keeping parameters for transport channels and RBs unchanged.
10	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state after sending this message.
11	→	MEASUREMENT REPORT	UE shall begin to report cell 2's CPICH Ec/No value periodically at 12 seconds interval. The measurement identity shall match that broadcasted in step 1

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 2

Information Element	Value/Remarks
UE Timers and constants in connected mode - T305	5 minutes.

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	
FACH measurement occasion info	
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	5
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin - Intra-frequency	-20dB, -115dBm
measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	
	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	Not present
- Reporting quantities for monitored set cells	Periodical reporting criteria
- CHOICE report criteria	Infinity
- Amount of reporting	12 seconds
- Reporting interval	Not Present
- Reporting Cell Status	Not Present
- Inter-frequency measurement system information	
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	

PAGING TYPE 1

Information Element	Value/Remarks
Paging record list - Paging Record - CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE identity - IMSI (DS-41)	CN Originator Terminating PS Data Call, PS Domain IMSI (DS-41) Set to the same IMSI (DS-41) digits found in the test USIM.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Initial UE Identity Establishment cause Measured results on RACH - Measured result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measured results for monitored cells	Check to see if it is the same as in PAGING TYPE 1 message Check to see if set to "Paging Response" Check to see if value is present Check to see if this IE is absent

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell update cause Protocol error indicator Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measurement results for monitored cells Protocol error information	Check to see if set to same U-RNTI value assigned in RRC CONNECTION SETUP message. Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if set to 'FALSE' CPICH Ec/No Checked to see if set to within an acceptable range. Checked to see if this IE is not present. Check to see if set to 'FALSE'

PHYSICAL CHANNEL RECONFIGURATION

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH".

MEASUREMENT REPORT

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is within acceptable range
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

8.4.1.3.5 Test Requirement

After step 3 the UE shall send RRC CONNECTION REQUEST message in response to the paging message sent by the SS, which includes reading of the current cell's CPICH Ec/No value.

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages.

After step 6 the UE shall initiate cell updating procedure by transmitting CELL UPDATE message. In this message, the cause shall be set to "periodic cell updating". It shall include measurement readings for the current cell (cell 1) CPICH Ec/No measurement quantity.

After step 10 the UE shall move to CELL_DCH state and transmit MEASUREMENT REPORT messages at 12 seconds interval. In these messages, neighbouring cell 2's CPICH Ec/No value shall be reported. The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in SYSTEM INFORMATION BLOCK TYPE 12 messages transmitted in step 1.

8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.4.1 Definition

8.4.1.4.2 Conformance requirement

After entering CELL_FACH state from idle mode, the UE shall start to monitor the list of "inter-frequency" neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages on BCCH/FACH.

Reference

3GPP TS 25.331, clause 8.4.1.10

8.4.1.4.3 Test Purpose

To confirm that the UE begins to monitor the list of neighbouring cell assigned in the IE "inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, after it enters CELL_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

8.4.1.4.3 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a downlink transmission level for CPICH RSCP at -40 dBm, cell 2 is also active but with a transmission power 10dB below cell 1. The carrier frequency of cell 2 in

the uplink direction is 1 UARFCN above that of cell 2, and the downlink carrier is 1 UARFCN below that of cell 1.

UE : idle state and has successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list for inter-frequency measurement type. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH Ec/No".

SS pages the UE with the cause "Incoming packet-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH channel in the uplink and S-CCPCH(FACH) channel on the downlink to the UE. UE then moves to CELL_FACH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from inter-frequency cells belonging to the monitored set. SS decreases the transmission power of CPICH in cell 1 by 10dB. At the same time, it raises the corresponding downlink transmission power of cell 2 by 10dB. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to report this event. Upon receiving this message, SS replies with the default CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	SS allocates PRACH and S-CCPCH resources to UE
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_FACH state.
6				SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.
7				SS decreases the transmission power of cell 1 by 10dB and increases cell 2's downlink power by 10dB.
8		→	CELL UPDATE	UE shall detect that cell 2 has become stronger than cell 1. It sends this message after reselecting to cell 2
9		←	CELL UPDATE CONFIRM	Use default message.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 12

clauseInformation Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	2
- k_UTRA	Not Present
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	Not Present
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	Not Present
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	Not Present
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	Set to the next uplink UARFCN after cell 1
- UARFCN uplink (Nu)	Set to the previous downlink UARFCN before cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	0 dB
- Cell individual offset	0 chips
- Reference time difference to cell	0 chips
- Primary CPICH Info	Set to same code as used for cell 2
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	Not Present
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-frequency measurement quantity	Inter-frequency reporting criteria
CHOICE Reporting criteria	0
- Filter coefficient	CPICH Ec/No
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	CPICH Ec/No
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	2.0dB
- Hysteresis	0 sec
- Time to trigger	Infinity
- Amount of reporting	0
- Reporting interval	Not Present
- Parameters required for each non used frequency	Not Present
- Threshold non-used frequency	-55dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

PAGING TYPE 1

For this message, use the same message contents as in step 2 of clause 8. 4.1.3.3.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content defined in TS 34.108 Clause 8, which is marked as "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the message sub-type in default message content defined in TS 34.108 Clause 8.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity for cell 2.

After step 7 the UE shall reselect to cell 2 and transmit a CELL UPDATE message on the uplink CCCH of cell 2.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.5.1 Definition

8.4.1.5.2 Conformance requirement

After entering CELL_FACH state from CELL_DCH state, the UE shall terminate intra-frequency type measurement reporting originating from a previous MEASUREMENT CONTROL message. If indicated in the system information messages, the UE shall start to monitor neighbouring cells. The UE shall apply the reporting criteria specified in system information during a subsequent return to CELL_DCH state. If requested to perform measurement reporting on RACH channels, the UE shall append the measured results when transmitting uplink RACH messages.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.5.3 Test Purpose

To confirm that the UE ceases to perform intra-frequency measurement specified in a previously received MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state. To confirm that the UE read the system information when in CELL_FACH state and starts to monitor the neighbouring cells as indicated in system information messages. To confirm that the UE performs measurements on uplink RACH channel and append the measured results in RACH messages, when requested in the system information messages.

8.4.1.5.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, but the transmitter of cell 3 is switched off. Cell 1 is transmitting its CPICH (RSCP) at 20 dB above cell 2. The downlink UTRA carriers transmission strength for cell 1 is identical to that of cell 2.

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode and has selected cell 1 as the current cell. SYSTEM INFORMATION BLOCK TYPE 12 message is modified from its default message contents, in order to prevent the reporting of CFN-SFN difference. No measurement requirements are specified for the UE in system information block (type 11 and 12) messages.

SS then prompts the test operator to initiate an outgoing call. When UE transmits a RRC CONNECTION REQUEST message on RACH, SS replies with RRC CONNECTION SETUP message. Uplink and downlink DPDCH physical channels are allocated. Upon receiving RRC CONNECTION SETUP message, the UE shall transmit RRC CONNECTION SETUP COMPLETE message on DCCH and then moves to CELL_DCH state. SS then sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement, based on an estimation of cell 2's CPICH Ec/No. At the same time, reporting of cell 2's CPICH is commanded with the reporting criteria set to "periodic reporting" and reporting interval set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message, triggering a switch of transport channels from DCH/DCH to RACH/FACH. After receiving this message, the UE shall reconfigure itself and replies with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS acknowledges this message and the UE shall move to CELL_FACH state and read the system information messages. SS monitors the uplink to verify that no MEASUREMENT REPORT messages are received. In SYSTEM INFORMATION BLOCK TYPE 12 message, SS includes cell 3 into the neighbour cells monitoring list. IE "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in this message. An event-triggered (event type 1a) reporting criterion is specified for intra-frequency measurements. The transmission strength of CPICH for cell 3 is increased until it exceeds the lower bound of the reporting range specified. SS then pages for the UE using PAGING TYPE 1 message. The UE shall respond with a CELL UPDATE message, which comprises CPICH Ec/No measurements for cell 1 and 3. Upon the receipt of CELL UPDATE message, SS replies with CELL UPDATE CONFIRM message. This message does not change the physical resource nor allocate any new RNTI identities. The UE shall remain in CELL_FACH state. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, this time specifying dedicated physical resources for both uplink and downlink direction. The UE shall then send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages. SS verifies that all messages received pertain to the periodic measured value of cell 2's CPICH Ec/No value. UE shall not send any reports containing the measured values of cell 3.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and test operator is asked to make an outgoing call.
2		→	RRC CONNECTION REQUEST	
3		←	RRC CONNECTION SETUP	Uplink and downlink DPCH resources are allocated.
4		→	RRC CONNECTION SETUP COMPLETE	UE shall move to CELL_DCH state.
5		←	MEASUREMENT CONTROL	SS requests for measurement and reporting of cell 2's CPICH Ec/No value.
6		→	MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval. SS waits for 2 consecutive reports before proceeding to step 7.
7		←	PHYSICAL CHANNEL RECONFIGURATION	SS switches the physical resources to common physical channels.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall reconfigure its uplink and downlink channels before transiting to CELL_FACH state.
9		←	SYSTEM INFORMATION BLOCK TYPE 12	SS includes cell 3 into the monitored neighbour cell list. SS waits for 1 minutes and verifies that no MEASUREMENT REPORT messages are received. Cell 3 is switched on, and SS adjusts the transmission power for CPICH such that its Ec/No falls into the report range specified.
10		←	PAGING TYPE 1	SS pages for UE using the assigned U-RNTI identity.
11		→	CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and 3 appended.
12		←	CELL UPDATE CONFIRM	No change in physical resource allocation and RNTI identities.
13		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates dedicated physical channels.
14		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
15		←	MEASUREMENT REPORT	UE shall continue to report cell 2's CPICH Ec/No value on a periodic basis.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Transition to CELL_DCH”.

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	5
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	
- CHOICE measurement	Check to see if set to “Intra-frequency measured results list”
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Packet to CELL_FACH from CELL_DCH in PS)”

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	6
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	Only 1 reporting event is defined
- Intra-frequency event identity	1a
- Triggering condition	Monitored set cells
- Reporting range	10.0 dB
- Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- Reporting Threshold	Not Present
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting Interval	8 seconds
- Inter-frequency measurement system information	Not present
- Inter-system measurement system information	Not present
- Traffic volume measurement system information	Not present
- UE internal measurement system information	Not present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

PAGING TYPE 1

Information Element	Value/Remarks
Page Record List - Page Record - CHOICE Paging originator - U-RNTI	UTRAN Originator Set to same U-RNTI value as assigned in the RRC CONNECTION SETUP message
BCCH modification info	Not Present

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Paging Response"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measurement results for monitored cells - SFN-SFN observed time difference - Primary CPICH info - Primary scrambling code - CHOICE measurement quantity - CPICH Ec/No	Check to see if set to CPICH Ec/No Check to see if it is within acceptable range Not Checked Check to see if the same as cell 3's code. Check to see if set to CPICH Ec/No Check to see if it is within acceptable range Check to see if it is absent
Protocol error information	

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH in PS")

MEASUREMENT REPORT (Step 15)

The contents of this message should be the same as in step 6.

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain the measured result of cell 2's CPICH Ec/No value.

After step 8, the UE shall not send any MEASUREMENT REPORT messages which report quantities requested in MEASUREMENT CONTROL messages in step 5.

After step 10, the UE shall respond to the paging and transmit a CELL UPDATE message. In this message, the measured values CPICH Ec/No for cell 1 and cell 3 shall be included.

After step 14, the UE shall revert to the original measurement reporting mechanism and send MEASUREMENT REPORT messages containing estimates for cell 2's CPICH Ec/No value. The UE shall not transmit any MEASUREMENT REPORT messages, which indicate measurement quantities of cell 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

When transiting from CELL_DCH state to CELL_FACH state, the UE shall terminate all reporting activities related to inter-frequency measurements. After reaching CELL_FACH state, the UE shall begin to monitor neighbouring cells listed in the IE “inter-frequency cell info” of the system information type 12 message.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.6.3 Test Purpose

To verify that UE ceases to transmit MEASUREMENT REPORT messages when moving from CELL_DCH state to CELL_FACH, even if it has detected that reporting criteria have been satisfied in CELL_FACH state. To verify that the UE extracts information for inter-frequency measurement from system information messages after reaching CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

SS: 2 cells – ~~Both Cell 1 and cell 2 is~~ are active ~~while cell 2 is inactive~~. Cell 2 is allocated a frequency which is 1 UARFCN away from cell 1 in both uplink and downlink directions. The applicable radio conditions for cell 1 and cell 2 are as follow:

	Cell 1	Cell 2
UARFCN (N_u and N_d)	Channel 1	Channel 2
CPICH RSCP	-75 dBm	-85 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm
S	15	5

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode. SS pages the UE with the establishment cause set to “Terminating PS Data Call”. The SYSTEM INFORMATION TYPE 12 message is modified so that no measurement tasks are to be performed by the UE. The UE shall respond to the paging by sending a RRC CONNECTION REQUEST message on the uplink CCCH ~~carried by PRACH~~. Upon receiving this message, SS allocates dedicated DPDCH physical channels to the UE by transmitting RRC CONNECTION SETUP message. The UE shall reply by transmitting a RRC CONNECTION SETUP COMPLETE message. SS then checks the IE “Measurement Capability” of this message and verifies that the UE is capable of performing inter-frequency measurements under FDD mode. After the confirmation of the UE inter-frequency measurement ability, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, information related to the radio bearers and uplink/downlink radio resources remain unchanged as compared to the equivalent IEs found in RRC CONNECTION SETUP message. The only difference concerns IE “DPCH compressed mode info”, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS then send a MEASUREMENT CONTROL message to the UE, specifying that cell 2 be the measurement object for inter-frequency type measurement. The periodic reporting criterion is selected for this measurement. SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing measured result of cell 2’s reporting quantity (CPICH Ec/No). SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, requesting the UE to switch ~~its~~ from uplink and downlink DPDCH to common physical channels. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then moves to CELL_FACH state. SS waits for another 8 seconds to detect any possible uplink MEASUREMENT REPORT messages as a result of inter-frequency measurements. SS then increases the transmission power of cell 2 by 20 dBm. SS waits for [x] seconds to allow the UE to perform cell re-selection. The UE shall transmit a CELL

UPDATE message on the uplink CCCH of cell 2, specifying the cause as “cell re-selection”. SS replies with CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and camped onto cell 1. SYSTEM INFORMATION BLOCK TYPE 12 is redefined, disabling all measurement and reporting activities.
2		←	PAGING TYPE 1	SS pages UE with cause set to “incoming circuit-switched call”
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	Uplink and downlink DPDCH resources are allocated.
5		→	RRC CONNECTION SETUP COMPLETE	UE shall indicate that it's capable of performing inter-frequency measurement for FDD mode.
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall enter CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that cell 2 be monitored. SS waits for 8 seconds.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 2's CPICH Ec/No value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS changes the physical channel allocation to common channel configuration.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12				SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected.
13				SS changes SYSTEM INFORMATION BLOCK TYPE 12 message to request that cell 2 <u>to</u> be included into neighbour cell list for inter-frequency measurements.
14				SS increases the transmission power of cell 2 by 20 dBm, and then wait for a [x] seconds to allow the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall detect that cell 2 has become the best cell and then perform cell re-selection procedure.
16		←	CELL UPDATE CONFIRM	SS acknowledges the cell 2 is updated.

Notes:

The value [x] seconds is TBD, after the cell re-selection duration is determined from TS 25.304.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE Internal measurement system information	Not Present

PAGING TYPE 1

Information Element	Value/Remarks
Paging Record List	
- Paging Record	
- CHOICE Paging originator	CN Originator
- Paging cause	Terminating PS Data Call
- CN domain identity	CS Domain
- CHOICE UE Identity	IMSI (DS-41)
- IMSI (DS-41)	Set to the same value as in USIM card
BCCH modification info	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 98.4 of TS34.108, which is entitled “Transition to CELL_DCH”

RRC CONNECTION SETUP COMPLETE

Information Element	Value/Remarks
Hyperframe Number	Not checked.
UE Radio access capability	
- Conformance test compliance	Checked to see if set to 'R99'
- PDCP capability	Not checked.
- RLC capability	Not checked.
- Transport channel capability	Not checked.
- RF capability	Not checked.
- Physical channel capability	Not checked.
- UE multi-mode/multi-RAT capability	Not checked.
- Security capability	Not checked.
- LCS capability	Not checked.
- Measurement capability	
- FDD measurements DL	Checked to see if set to 'TRUE'
- TDD measurements DL	Not checked.
- GSM measurements DL	Not checked.
- GSM 900 DL	Not checked.
- DCS 1800 DL	Not checked.
- GSM 1900 DL	Not checked.
- Multi-carrier measurement DL	Not checked.
- FDD measurements UL	Checked to see if set to 'TRUE'
- TDD measurements UL	Not checked.
- GSM measurements UL	Not checked.
- GSM 900 UL	Not checked.
- DCS 1800 UL	Not checked.
- GSM 1900 UL	Not checked.
- Multi-carrier measurement UL	Not checked.
UE system specific capability	Not checked.

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Clause 98.4 of TS34.108, which is entitled “(Packet to CELL_DCH from CELL_DCH in PS”, with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ~~TPRM~~ ITP	F/2
- UL/DL Mode	~~F/2~~ Not Present
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- ~~Scrambling code change~~	2.0
- Downlink frame type	1.0
- DeltaSIR ₁	Not Present
- DeltaSIRAfter ₁	None
- DeltaSIR ₂	Not Present
- TX Diversity Mode	
- SSDT information	
- S field	
- Code Word Set	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/Remark
Measurement Identity Number	15
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 2
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 15
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 2
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 2
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Use the same message sub-type found in Clause ~~98.4~~ of TS34.108, which is entitled “(Packet to CELL_FACH from CELL_DCH in PS”.

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in RRC CONNECTION SETUP message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to “Cell Reselection”
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the same message sub-type found in Clause ~~98.4~~ of TS34.108.

8.4.1.6.5 Test Requirement

After step 4 the UE shall transmit RRC CONNECTION SETUP COMPLETE message with the IE “Measurement capability”, indicating that both uplink and downlink inter-frequency measurements for FDD mode are supported.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 2’s CPICH Ec/No value.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages which contain inter-frequency measured results for cell 2’s CPICH Ec/No value.

After step 14 the UE shall transmit CELL UPDATE message to inform that a cell reselection to cell 2 has occurred.

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

When transiting from CELL_FACH state to CELL_DCH state, the UE shall resume intra-frequency measurement if it has previously stored such a measurement context in CELL_DCH state. If the measurement context indicates reporting in CELL_DCH state, the UE shall re-start the associated reporting activities. In the case when the UE is not assigned any measurement tasks, it shall monitor the list of neighbouring cells stated in system information messages. It shall transmit MEASUREMENT REPORT messages when the reporting criteria (if specified in system information messages) are met. When in CELL_DCH state, the UE shall override existing measurement and reporting contexts extracted from system information messages, if a MEASUREMENT CONTROL message is received. The UE shall then apply the new measurement and reporting parameters accordingly.

Reference

3GPP TS 25.331, clause 8.4.1.8

8.4.1.7.3 Test Purpose

To confirm that UE resumes intra-frequency measurement and reporting when it enters CELL_DCH state from CELL_FACH state, if such a condition exists before entering CELL_DCH state. To confirm that the UE continues to monitor the neighbour cells intra-frequency measurement list found in system information messages, if no previous assigned measurement is present. To confirm that the UE transmits MEASUREMENT REPORT messages if reporting conditions stated in system information messages have been satisfied. To confirm that a subsequent MEASUREMENT CONTROL message received in CELL_DCH state

Initial Condition

System Simulator: 3 cells –All 3 are all active. The transmission power (RSCP) for CPICH of the 3 cells are as follow: cell 1 (-40dBm), cell 2 (-55dBm) and cell 3 (-70dBm).

UE: CELL_FACH in cell 1.

Test Procedure

The UE is brought to CELL_FACH state, after the test operator has successfully initiated a packet-switched data call. The SYSTEM INFORMATION BLOCK TYPE 12 message is changed with respect to the default message contents, specifying that cell 2 is to be included in the neighbouring cell list for intra-frequency measurement. Event 1e is selected in IE "Intra-frequency measurement reporting criteria".

SS send a PHYSICAL CHANNEL RECONFIGURATION message to UE, allocating dedicated physical channels on both uplink and downlink direction. Upon receiving such a message, the UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and move to CELL_DCH state. The UE shall send MEASUREMENT REPORT messages to indicate that the measured result of cell 2, as the measurement quantity has exceeded the threshold value in system information message. After receiving this message, SS transmits MEASUREMENT CONTROL message in which it specifies that intra-frequency measurement for cell 3 shall be performed. The reporting criteria are the same as in SYSTEM INFORMATION BLOCK TYPE 12 message, except that the reporting threshold is lowered. After receiving such a message, the UE shall transmit another MEASUREMENT REPORT message. SS verifies that only measurement reading for cell 3 is included and no IEs shall be present, pertaining to measurement quantity in cell 2.

Next, SS sends PHYSICAL CHANNEL RECONFIGURATION message to UE. In this message, the physical channel resources are switched to common physical channels – PRACH (RACH) for the uplink and S-CCPCH (FACH) for the downlink. UE shall reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE and transits to CELL_FACH. SS checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received. SS then transmits another MEASUREMENT CONTROL message. The key parameters employed are: measurement type = 'intra-frequency measurement', measurement object = 'cell 2', reporting criteria = 'periodic reporting', measurement validity = 'resume', UE state for reporting = 'CELL_DCH'. SS waits for 10 seconds before sending a PHYSICAL CHANNEL RECONFIGURATION message, comprising DPDCH physical channels. UE shall then return to CELL_DCH state, start to monitor the neighbour cell specified by the SS while the UE was in CELL_FACH state. The UE shall resume periodic reporting of cell 2's CPICH RSCP measured results by sending MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_FACH after having successfully connected a packet-switched data call. SYSTEM INFORMATION TYPE BLOCK TYPE 12 message is changed according to the descriptions in Specific Message Contents.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates DPDCH physical channels.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
4		←	MEASUREMENT REPORT	Reports cell 2's RSCP value.
5		→	MEASUREMENT CONTROL	Specifies cell 3 as the measurement object for intra-frequency measurement. The reporting criteria is the same as defined in SYSTEM INFORMATION BLOCK TYPE 12 message, with the exception that threshold for event 1e is lowered.
6		←	MEASUREMENT REPORT	UE shall report the estimated value for cell 3's CPICH RSCP reading only.
7		→	PHYSICAL CHANNEL RECONFIGURATION	Allocates PRACH and S-CCPCH physical channels.
8		←	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9				SS checks that no MEASUREMENT REPORT messages are sent by UE.
10		→	MEASUREMENT CONTROL	SS indicates that intra-frequency measurement and reporting for cell 2 be resumed if the UE subsequently transits to CELL_DCH state.
11		→	PHYSICAL CHANNEL RECONFIGURATION	SS waits for 10 seconds before sending this message. DPCH physical channels are assigned to the UE in this message.
12		←	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
13		←	MEASUREMENT REPORT	UE begins to report cell 2's measured results again.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	10
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- W	Not present
- Hysteresis	1.0 dB
- Threshold used frequency	-60dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present
- Reporting Threshold	-60dBm
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting Interval	16 seconds
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR-324) and IE "Reporting Threshold" (originated from CR-289r1) are basically similar in function, it is not clear whether one should be removed.

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Packet to CELL_DCH from CELL_FACH in PS”

MEASUREMENT REPORT (Step 4)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 10
Measurement Results	
- CHOICE measurement	Check to see if set to “Intra-frequency measured results list”
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5)

Information Element	Value/Remark
Measurement Identity Number	11
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	1.0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Reporting Threshold	-90dBm
- Time to Trigger	0
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 11
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 3
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_FACH from CELL_DCH in PS"

MEASUREMENT CONTROL (Step 10)

Information Element	Value/Remark
Measurement Identity Number	12
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for unlisted cells	Not present
- Reporting cell status	Not present
- Measurement validity	Resume
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 2
- W	Not Present
- Hysteresis	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Reporting Threshold	-65dBm
- Time to Trigger	0
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting cell status	Not Present
DPCH compressed mode status info	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 11)

Same as in step 2

MEASUREMENT REPORT (Step 13)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 12
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

8.4.1.7.5 Test Requirement

After step 3 the UE shall report cell 2's CPICH RSCP value by transmitting a MEASUREMENT REPORT message.

After step 5 the UE shall delete all measurement and reporting contexts obtained from system information messages. However, it shall transmit a MEASUREMENT REPORT message containing measured results of cell 3's CPICH RSCP value only.

After step 8 the UE shall stop intra-frequency measurement reporting assigned previously in the MEASUREMENT CONTROL message received in step 5.

After step 12 the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT message, containing measured results of cell 2's CPICH RSCP value.

8.4.1.8 Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.8.1 Definition

8.4.1.8.2 Conformance requirement

When transiting from CELL_FACH state to CELL_DCH state, the UE shall stop monitoring the list of inter-frequency neighbour cells indicated in system information messages. If the UE has a previously stored inter-frequency measurement context marked as 'resume', it shall reinstate the suspended measurement and associated reporting activities after it has re-entered CELL_DCH state. The UE shall be able to start/terminate inter-frequency measurement by decoding the "DPCH compressed mode status info" IE in MEASUREMENT CONTROL messages.

Reference

3GPP TS 25.331 clause 8.4.1.8, 8.5.7.6.13

8.4.1.8.3 Test Purpose

To confirm that the UE erases all inter-frequency measurement contexts used in CELL_FACH state, when it moves to CELL_DCH. To confirm that the UE resumes inter-frequency measurements and reporting, which was assigned prior to CELL_FACH state, after it moves to CELL_DCH state. To confirm that the UE resumes inter-frequency measurement and reporting activities after it has received a MEASUREMENT CONTROL message specifying that a stored compressed mode pattern sequence be re-activated.

Initial Condition

SS: 3 cells – All 3 cells are active and the applicable radio conditions are stated in the table below:

	Cell 1	Cell 2	Cell 3
UARFCN (N_u and N_d)	Channel 1	Channel 2	Channel 2
CPICH RSCP	-60 dBm	-65 dBm	-75 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm	-90 dBm
S	30	25	15

UE: CELL_FACH in cell 1 after an incoming packet-switched data call is successfully established.

Test Procedure

The UE is in CELL_FACH state after a successful connection, triggered by an incoming packet-switched data call. SS modifies the content of SYSTEM INFORMATION BLOCK TYPE 12 message, which indicates that cell 2 shall be included in the list of neighbouring cells to be monitored for inter-frequency measurements. Next, SS transmits MEASUREMENT CONTROL message to request the UE to execute an inter-frequency measurement for cell 3. The parameters of the reporting criteria are as follow: event-triggered with event identity = '2c', threshold for non-used frequency = '-80 dBm', hysteresis = '1.0dB', time to trigger = '10 seconds', amount of reporting = '1' and reporting interval = '0'. In the same message, IE "Measurement validity" is set to 'resume' and "UE state for reporting" is assigned the value 'CELL_DCH'.

SS sends PHYSICAL CHANNEL RECONFIGURATION message to allocate dedicated physical channels to the UE. Simultaneously, SS uses this message to command UE to start applying compressed mode mechanism for DPCH. The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then move to CELL_DCH state. SS waits for 10 seconds. The UE shall transmit MEASUREMENT REPORT message, containing the selected frequency quality estimate (in the case CPICH Ec/No) of cell 3. SS verifies that this message does not contain measured results for cell 2. After sending this message, the UE shall not transmit any more MEASUREMENT REPORT messages.

SS modifies the reporting criteria by transmitting a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC. In this message, SS commands the UE to perform inter-frequency measurement and reporting for cell 3 using periodic reporting mechanism. Upon receiving this message, the UE shall transmit MEASUREMENT REPORT message at 2 seconds interval. In the next sequence, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1. The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities. Following this, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE. SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall be able to receive MEASUREMENT REPORT messages continuously at 2 seconds interval.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_FACH state after establishing an incoming packet-switched data call. SS modifies SYSTEM INFORMATION BLOCK TYPE 12 to include cell 2 into the neighbour cell list for inter-frequency measurements.
2		←	MEASUREMENT CONTROL	SS specifies inter-frequency measurement and reporting parameters for cell 3.
3		←	PHYSICAL CHANNEL RECONFIGURATION	SS allocates DPCH physical channels and specifies compressed mode parameters
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_DCH state.
5		→	MEASUREMENT REPORT	UE shall resume inter-frequency measurement task for cell 3 and transmit this message to report the measured CPICH Ec/No value
<u>6</u>		<u>←</u>	<u>MEASUREMENT CONTROL</u>	<u>SS changes the reporting criteria for cell 3 to 'periodic reporting'</u>
<u>7</u>		<u>→</u>	<u>MEASUREMENT REPORT</u>	<u>UE shall begin to transmit this message at 2 seconds interval.</u>
<u>8</u>		<u>←</u>	<u>PHYSICAL CHANNEL RECONFIGURATION</u>	<u>SS deactivates the currently used pattern sequence for compressed mode operation.</u>
<u>9</u>		<u>→</u>	<u>PHYSICAL CHANNEL RECONFIGURATION COMPLETE</u>	<u>UE stays in CELL_DCH state. SS waits for 5 seconds and verifies that no MEASUREMENT REPORT messages are received.</u>
<u>10</u>		<u>←</u>	<u>MEASUREMENT CONTROL</u>	<u>SS activates the pattern sequence stored by the UE.</u>
<u>11</u>		<u>→</u>	<u>MEASUREMENT REPORT</u>	<u>SS checks that MEASUREMENT REPORT messages are received at 2 seconds interval.</u>

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12 (Step 1)

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency measurement identity number	15
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -90dBm
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	Not Present
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0dB
- Time to trigger	10 sec
- Amount of reporting	1
- Reporting interval	0
- Parameters required for each non used frequency	
- Threshold non-used frequency	-80dBm
- W non-used frequency	0.0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

MEASUREMENT CONTROL (Step 2)

Information Element	Value/Remark
Measurement Identity Number	14
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 3
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 3
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	
- Resume/Release	Resume
- UE State	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	0
- Time to trigger	10 seconds
- Amount of reporting	1
- Reporting Interval	0
- Reporting cell status	Not Present
- Parameters required for each non-used frequency	
- Threshold non used frequency	-80 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

Use the same message sub-type found in Clause 98.4 of TS34.108, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ~~TPRM~~ ITP	F/2
- UL/DL Mode	~~F/2~~ Not Present
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- ~~Scrambling code change~~	2.0
- Downlink frame type	1.0
- DeltaSIR ₁	Not Present
- DeltaSIRAfter ₁	None
- DeltaSIR ₂	Not Present
- TX Diversity Mode	
- SSDT information	
- S field	
- Code Word Set	

MEASUREMENT REPORT (Step 5)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 14
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 3
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 3
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 3
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Event Results	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 3
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 3
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

MEASUREMENT CONTROL (Step 6)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Measurement Identity Number</u>	<u>14</u>
<u>Measurement Command</u>	<u>Modify</u>
<u>Measurement Reporting Mode</u>	<u>Not Present</u>
<u>Additional measurements list</u>	<u>Not Present</u>
<u>CHOICE measurement type</u>	<u>Inter-frequency measurement</u>
- <u>Inter-frequency cell info list</u>	
- <u>Removed inter-frequency info list</u>	<u>Not Present</u>
- <u>New inter-frequency info list</u>	
- <u>Inter-frequency cell id</u>	<u>Set to id of cell 3</u>
- <u>Frequency info</u>	
- <u>UARFCN uplink (Nu)</u>	<u>UARFCN of the uplink frequency for cell 3</u>
- <u>UARFCN downlink (Nd)</u>	<u>UARFCN of the downlink frequency for cell 3</u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>0 chips</u>
- <u>Primary CPICH Info</u>	
- <u>Primary Scrambling Code</u>	<u>Set to same code as used for cell 3</u>
- <u>Primary CPICH TX power</u>	<u>Not Present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>TX Diversity Indicator</u>	<u>FALSE</u>
- <u>Inter-frequency measurement quantity</u>	
- <u>CHOICE reporting criteria</u>	<u>Inter-frequency reporting criteria</u>
- <u>Filter Coefficient</u>	<u>1</u>
- <u>Measurement quantity for frequency quality estimate</u>	<u>CPICH Ec/No</u>
- <u>Inter-frequency reporting quantity</u>	
- <u>UTRA Carrier RSSI</u>	<u>FALSE</u>
- <u>Frequency quality estimate</u>	<u>TRUE</u>
- <u>Non frequency related cell reporting quantities</u>	
- <u>SFN-SFN observed time difference</u>	<u>No report</u>
- <u>Cell Identity</u>	<u>TRUE</u>
- <u>CPICH Ec/No</u>	<u>FALSE</u>
- <u>CPICH RSCP</u>	<u>TRUE</u>
- <u>Pathloss</u>	<u>FALSE</u>
- <u>CFN-SFN observed time difference</u>	<u>FALSE</u>
- <u>Reporting cell status</u>	<u>Not present</u>
- <u>Measurement validity</u>	<u>Not present</u>
- <u>Inter-frequency set update</u>	<u>Not Present</u>
- <u>CHOICE report criteria</u>	<u>Periodic reporting criteria</u>
- <u>Amount of reporting</u>	<u>Infinity</u>
- <u>Reporting interval</u>	<u>2000 milliseconds</u>
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 7, 11)

<u>Information Element</u>	<u>Value/Remarks</u>
<u>Measurement identity number</u>	<u>Check to see if set to 14</u>
<u>Measured Results</u>	
- <u>CHOICE measurement</u>	<u>Check to see if set to "Inter-frequency measured results list"</u>
- <u>Inter-frequency measurement results</u>	
- <u>Frequency info</u>	
- <u>UARFCN (uplink)</u>	<u>Check to see if set to the UARFCN of the uplink frequency for cell 3</u>
- <u>UARFCN (downlink)</u>	<u>Check to see if set to the UARFCN of the downlink frequency for cell 3</u>
- <u>UTRA carrier RSSI</u>	<u>Check to see if it is absent</u>
- <u>Inter-frequency cell measurement results</u>	
- <u>Cell measured results</u>	
- <u>Cell Identity</u>	<u>Check to see if set to the id of cell 3</u>
- <u>SFN-SFN observed time difference</u>	<u>Check to see if it is absent</u>
- <u>Primary CPICH Info</u>	
- <u>Primary Scrambling Code</u>	<u>Check to see if set to the same code for cell 3</u>
- <u>CPICH Ec/No</u>	<u>Check to see if it is present</u>
- <u>CPICH RSCP</u>	<u>Check to see if it is absent</u>
- <u>Pathloss</u>	<u>Check to see if it is absent</u>
- <u>CFN-SFN observed time difference</u>	<u>Check to see if it is absent</u>
<u>Event Results</u>	<u>Check to see if it is absent</u>

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

Use the same message transmitted in step 3 with the following modifications:

<u>Information Element</u>	<u>Value/Remarks</u>
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	<u>1</u>
- TGPS Status Flag	Inactive

MEASUREMENT CONTROL (Step 10)

<u>Information Element</u>	<u>Value/Remark</u>
Measurement Identity Number	Any number except 14
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- Transmission gap pattern sequence	
- TGPSI	<u>1</u>
- TGPS Flag	Active

8.4.1.8.5 Test Requirement

After step 4 the UE shall transmit a MEASUREMENT REPORT message, containing the measured results for cell 3's CPICH Ec/No value. The UE shall not transmit any messages pertaining to cell 2's measurements.

After step 6 the UE shall send MEASUREMENT REPORT messages, which comprises cell 3's CPICH Ec/No measured value at 2 seconds interval. The "Event results" IE shall be omitted in these messages.

After step 8 the UE shall not transmit any MEASUREMENT REPORT messages.

After step 10 the UE shall resume the transmission of MEASUREMENT REPORT messages with identical contents as in those received after step 6.

8.4.1.9 Measurement Control and Report: Unsupported measurement in the UE

8.4.1.9.1 Definition

8.4.1.9.2 Conformance requirement

If the UTRAN indicates the UE to perform a measurement that is not supported in the UE, the UE shall keep the measurement configuration. Then the UE shall transmit a MEASUREMENT CONTROL FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS25.331 clause 8.4.1.

8.4.1.9.3 Test purpose

To confirm that the UE transmits a MEASUREMENT CONTROL FAILURE message, with the value "unsupported measurement" specified in IE" failure cause" when the SS commanded the UE to perform an unsupported measurement by sending a MEASUREMENT CONTROL message.

8.4.1.9.4 Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_DCH

[Editor's note : It is assumed in this test that the UE under test does not possess any inter-system measurement capability. The mandatory type(s) of measurement capability that should be implemented by the UE is to be discussed]

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a MEASUREMENT CONTROL message which includes parameters (e.g. Measurement identity number : 2 , measurement command : Setup , measurement type: inter-system measurements, measurement reporting mode: unacknowledged and periodical reporting, measurement object: inter-system cell information, measurement quantity: Signal strength, reporting quantity: RSSI on BCCH carrier). As the UE under test does not support inter-system measurement, it shall transmit a MEASUREMENT CONTROL FAILURE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state.
2		←	MEASUREMENT CONTROL	Including the parameters (e.g. Measurement identity number : 2 , measurement command : Setup , measurement type: inter-system measurements, measurement reporting mode: unacknowledged and periodical reporting, measurement object: inter-system cell information, measurement quantity: Signal strength, reporting quantity: RSSI on BCCH carrier).
3		→	MEASUREMENT CONTROL FAILURE	Which is set to "unsupported measurement" in IE" failure cause".

Specific Message Content

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	2
Measurement Command	Setup
Measurement Reporting Mode	Unacknowledged mode
Additional measurements list	Not Present
CHOICE measurement type	Inter-system measurement
- Inter-system cell info list	
- Removed inter-system cells	Not Present
- New inter-system cells	1
- Inter-system cell id	
- CHOICE <i>Radio Access Technology</i>	GSM
- Qoffset _{s,n}	Not Present
- HCS Neighbouring Cell Information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -90dBm
- Maximum allowed UL TX power	Set to the maximum allowed by UE RF power class
- BSIC	Set to the BSIC code of cell 2
- BSIC ARFCN	Set to the ARFCN assigned to cell 2
- Output power	Not Present
- Inter-system measurement quantity	
- CHOICE <i>reporting criteria</i>	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-system reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting Cell Status	Not Present
- CHOICE Report Criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting Interval	32 seconds
<u>DPCCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT CONTROL FAILURE

Information Element	Value/Remarks
Failure cause	To check if it is set to "Unsupported measurement"

8.4.1.9.4 Test requirement

After step 2 the UE shall identify the unsupported measurement element in the MEASUREMENT CONTROL message and transmit a MEASUREMENT CONTROL FAILURE. In this message, the value "unsupported measurement" shall be specified in IE "failure cause".

8.4.1.10 Measurement Control and Report: Failure (Invalid Message Reception)

8.4.1.10.1 Definition

8.4.1.10.2 Conformance requirement

When the UE received a MEASUREMENT CONTROL message containing an unexpected conditional IE, it shall reply with a MEASUREMENT CONTROL FAILURE message stating the appropriate protocol error information. It shall maintain the monitoring and measurement reporting mechanism as in before the MEASUREMENT CONTROL message has been received.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.10.3

Test Purpose

To confirm that the UE does not change its current monitoring and measurement settings after it has received an illegal MEASUREMENT CONTROL message, which contains an unexpected IE error. To confirm that the UE resume its normal measurement reporting operations after transmitting MEASUREMENT CONTROL FAILURE message to the SS.

8.4.1.10.4

Method of test

Initial Condition

System Simulator : 1 cell.

UE : CELL_DCH

Test Procedure

The UE is initially brought to CELL_DCH. SS transmits a MEASUREMENT CONTROL message to the UE, commanding it to start transmitting report messages for the reporting quantity "UE Transmitted Power". SS then waits for the MEASUREMENT RERORT message with the allocated measurement identity to arrive. Then it transmits the MEASUREMENT CONTROL message again. In this message, SS requests that the reporting activities for "UE Transmitted Power" be stopped. At the end of this message, SS appends an unknown information element. When the UE receives this message, it shall reply with MEASURMENT CONTROL FAILURE message as it has detected a protocol error. It shall not cease to report its own transmission power level using MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
2		←	MEASUREMENT CONTROL	SS transmits this message on downlink DCCH to instruct UE to start reporting the quantity "UE transmit power".
3		→	MEASUREMENT REPORT	UE shall send this message periodically at 32 seconds interval
4		←	MEASURMENT CONTROL	SS sends a MEASUREMENT CONTROL message to request that UE stop the reporting activity.
5		→	MEASUREMENT CONTROL FAILURE	UE shall maintain its current measurement context and send this message.
6		→	MEASUREMENT REPORT	32 seconds after step 3, UE shall continue to transmit this message to the SS.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE Transmitted Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 3)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 3
Measurement Results	
CHOICE measurement	Check to see if set to "UE internal measurement"
- UE Transmitted Power	Check to see if the reported power is compatible with RF class
- UE Rx-Tx report entries	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 4)

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Stop
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Contains an arbitrary value
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT CONTROL FAILURE (Step 5)

Information Element	Value/Remark
Failure cause	Check to see if set to "protocol error"
Protocol error information	Check to see if set to "Message extension not comprehended"

MEASUREMENT REPORT (Step 6)

Same as in the requirement for step 3

8.4.1.10.5 Test Requirement

After step 4 the UE shall transmit MEASUREMENT FAILURE message, stating the IE "failure cause" as "protocol error" and IE "protocol error information" as "message extension not comprehended". It shall continue to send MEASUREMENT REPORT with the correct identity number and measurement result entries at approximately 32 seconds interval.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- Scrambling code change	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	No change
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- TFCI combining indicator	Not Present
- Secondary CCPCH info	TRUE
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	Primary CPICH may be used
- Secondary scrambling code	Not Present
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TFCI existence	FALSE
- Fixed or Flexible Position	TRUE
- Timing offset	Flexible
- TFCS	0
- Normal	(This IE is repeated for TFC number for PCH and FACH.)
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0 0
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	(PCH) (This IE is repeated for TFI number.) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set (FACH) (This IE is repeated for TFI number.) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info - Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - <u>Scrambling code change</u>	
- TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present
<u>DPCH Compressed mode status info</u>	<u>Not Present</u>

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive
- <u>Transmission gap pattern sequence</u>	
- <u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$

- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITPITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	<u>F/2</u> Not Present
~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	

- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	1
- TGPRC	FDD Measurement
- TGCFN	62

- Gain factor •d - Power offset Pp-m - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration</u>	
<u>parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8

- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- <u>Scrambling code change</u>	<u>No code change</u>
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- <u>Scrambling code change</u>	<u>SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)</u>
- TPC combination index	<u>No change</u>
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
- FACH/PCH information	Not Present

- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence</u>	
- <u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8

- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- <u>Scrambling code change</u>	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	<u>No change</u>
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	

- Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
<u>Scrambling code change</u>	<u>No code change</u>
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- <u>Scrambling code change</u>	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0

- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	
	Not Present
	Not Present
	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
<u>Scrambling code change</u>	<u>No code change</u>
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	150
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- <u>Scrambling code change</u>	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0

- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	
	Not Present
	Not Present
	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 2 1 Not Present 1 DCH 2 1
RB information to be affected	(UM DCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	0 1 DCH 1 1 1 1 DCH 1 1
RB information to be affected	(AM DCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 1 DCH 1 2 2 1 DCH 1 2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 1 DCH 1 3 3 1 DCH 1 3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	3 1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPS -TGPS Status Flag - <u>Transmission gap pattern sequence configuration parameters</u> - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ~~ITPRMITP~~ - UL/DL Mode	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL

- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2 Not Present
~~- Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	

- Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	1
-TGPSI	inactive
-TGPS Status Flag	
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- <u>Scrambling code change</u>	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- <u>Scrambling code change</u>	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	<u>No change</u>
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	

Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
- Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
- Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
- Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
- Maximum allowed UL TX power - Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	 -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value	0
- DPCH compressed mode info	1
- TGPSI	inactive
- TGPS Status Flag	
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
<u>Scrambling code change</u>	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	(TM CCCH for RRC) 5 1 RACH 1 5 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM CCCH for RRC) 6 1 FACH 1 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7 1 FACH 1 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) 8 1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	4
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	33dBm
Maximum allowed UL TX power	
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence</u>	
- <u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62

- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	Not Present
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- ~~Scrambling code change~~	~~No change~~
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	

- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	(TM CCCH for RRC) 5 1 RACH 1 5 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM CCCH for RRC) 6 1 FACH 1 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7 1 FACH 1 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) 8 1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	4
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	33dBm
Maximum allowed UL TX power	
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence</u>	
- <u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62

- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	Not Present
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- ~~Scrambling code change~~	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	

- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	
	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(TM DTCH)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm

- DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set - TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flag - Transmission gap pattern sequence	0 (single) - Reference to TS34.108 clause 6.10 Parameter Set - Flexible - TRUE - Not Present 0 1 - inactive
<u>configuration parameters</u> - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ~~TPRM~~ITP - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	- FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - SF/2 ~~F/2~~Not Present ~~No code change~~
<u>Scrambling code change</u> - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - DeltaSIR2 - DeltaSIRafter2 - TX Diversity mode - SSDT information - S field - Code Word Set	- A 2.0 1.0 - Not Present - Not Present - None - Not Present
Downlink PDSCH information CPCH SET info	- Not Present - Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 100 - Not Present - Not Present - Primary CPICH may be used - Not Present
<u>Scrambling code change</u> - TPC combination index	1 - SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) <u>No change</u> 0

- SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	-a - Not Present - Not Present
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(DTCH TM)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	(DTCH TM)
RB information to be affected	5
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	3
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	3
- Transport channel identity	1
- Logical channel identity	
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

- MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present 1 DCH 4 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	Not Present
- Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.)
	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
	0 0

- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration</u>	
<u>parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- ~~Scrambling code change~~	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	Not Present
- ~~DeltaSIRafter2~~	Not Present
- TX Diversity mode	None

- SSDT information - S field - Code Word Set	Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- Scrambling code change	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	No change
- Addition - TFCS addition	0
information(Reconfiguration/Addtion information)	-a
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	Not Present

- Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
DRAC static information	
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	

-Uplink DPCH power control info -DPCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set - Not Present
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flag	0 (single) - Reference to TS34.108 clause 6.10 Parameter Set Flexible - TRUE - Not Present 0 1 - inactive
- Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ~~ITPRM~~ITP - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	- FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - SF/2 ~~F/2~~Not Present ~~No code change~~
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - <u>DeltaSIR2</u> - <u>DeltaSIRafter2</u> - TX Diversity mode - SSDT information - S field - Code Word Set	- A 2.0 1.0 <u>Not Present</u> <u>Not Present</u> - None - Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 - Not Present - Not Present - Not Present - Primary CPICH may be used - Not Present 1 - SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) - No change
- Scrambling code change	No change

- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCl existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCl Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH information	3
- Transport channel identity	4
Deleted DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0

-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~ITPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- <u>Scrambling code change</u>	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	<u>No change</u>
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from •CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity	FACH
- PDCP info	1
- RLC info	5
- Downlink RLC mode	(TM BCCH for RRC)
- In-sequence delivery	7
- RB mapping info	Not Present
- Information for each multiplexing option	TRUE
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	TRUE
- Downlink RLC mode	1
- In-sequence delivery	PCH
- RB mapping info	2
- Information for each multiplexing option	1
- Number of RLC logical channels	Not Present
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to be affected	
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addition information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor •c - Gain factor •d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	0
- Addition - TFCS addition	0
information(Reconfiguration/Addition information)	Not Present
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	

- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM/TP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- <u>Scrambling code change</u>	<u>No code change</u>
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	<u>Not Present</u>
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- <u>Scrambling code change</u>	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	

Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from •CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity	FACH
- PDCP info	1
- RLC info	5
- Downlink RLC mode	(TM BCCH for RRC)
- In-sequence delivery	7
- RB mapping info	Not Present
- Information for each multiplexing option	TRUE
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	TRUE
- Downlink RLC mode	1
- In-sequence delivery	PCH
- RB mapping info	2
- Information for each multiplexing option	1
- Number of RLC logical channels	Not Present
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to be affected	
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	

- Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addition information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor •c - Gain factor •d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	0
- Addition - TFCS addition	0
information(Reconfiguration/Addition information)	Not Present
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Deleted DL TrCH information	
- Transport channel identity	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	

- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM/TP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- <u>Scrambling code change</u>	<u>No code change</u>
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	<u>Not Present</u>
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	150
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- <u>Scrambling code change</u>	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	

Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flag - Transmission gap pattern sequence configuration parameters	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive

- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2 Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- ~~Scrambling code change~~	~~SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)~~
- TPC combination index	~~No change~~
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	

- Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	

-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~ITPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH Information - Transport channel identity Added or Reconfigured UL TrCH information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent Not Present
- CTFC information - CTFC	

- Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	0.00 Not Present
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flag - Transmission gap pattern sequence configuration parameters - TGMP	Reference to TS34.108 clause 6.10 Parameter Set 33dBm
	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0
	1 inactive
	FDD Measurement

- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
~~- TPRMITP~~	~~Mode 1~~
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
~~- Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
~~- DeltaSIR2~~	~~Not Present~~
~~- DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
~~- Scrambling code change~~	~~No change~~
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	
- Normal	Not Present
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	

[illegible]

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
Deleted UL TrCH Information - Transport channel identity	1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m - Deleted DL TrCH Information - Transport channel identity - Deleted DL TrCH Information - Transport channel identity - Deleted DL TrCH Information - Transport channel identity - Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info - Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) - Maximum allowed UL TX power - Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit - Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 3 4 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0

-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~ITPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- <u>Scrambling code change</u>	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	<u>No change</u>
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	
- Transport channel identity	2
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	inactive
- Transmission gap pattern sequence configuration	
<u>parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8

- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- ~~Scrambling code change~~	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present

- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1

- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature - Signature - Signature	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 4 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm 0 1

- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2 Not Present
- <u>Scrambling code change</u>	<u>No code change</u>
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present

- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - <u>Scrambling code change</u>	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
	Not Present
	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence - Number of FBI bit - Puncturing Limit	TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flag - Transmission gap pattern sequence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive
<u>configuration parameters</u> - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ~~TPRM~~ITP - UL/DL Mode - Downlink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL SF/2

- Uplink compressed mode method	<u>F/2 Not Present</u>
~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Reference to TS34.108 clause 6.10 Parameter Set
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Reference to TS34.108 clause 6.10 Parameter Set
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	Reference to TS34.108 clause 6.10 Parameter Set
Deleted DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Fixed

- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	4 bits
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2 Not Present~~
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	1
- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	

- TFCSI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC information - CTFC	0
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH information	0dB
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	0.00
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- DCH quality target - BLER Quality value - Transparent mode signalling info	2
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	33dBm
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set

- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set 0
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	1
-TGPSI	inactive
-TGPS Status Flag	
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2 Not Present~~
~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Deleted DL TrCH information	0
Added or Reconfigured DL TrCH information	0dB
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number)
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
Downlink information common for all radio links	8slot
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible

- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set 0
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	1
-TGPSI	inactive
-TGPS Status Flag	
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2 Not Present~~
~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	<u>Not Present</u>
- DeltaSIRafter2	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	

- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5
Signalling RB information to setup	(TM RLC) TRUE
- RB identity - CHOICE RLC info type - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 5 1 (UM CCCH for RRC) 6
Signalling RB information to setup	(UM RLC)
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Max DAT retransmissions 4
Signalling RB information to setup	1 FACH 1 5 (TM BCCH for RRC) 7
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM RLC) TRUE
Signalling RB information to setup	1 FACH 1 6 (TM PCCH for RRC) 8
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM RLC) TRUE
UL Transport channel information for all transport channels	1 FACH 2 1
- TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d	0
	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number	0 1 2 3 4 5 6 7 Reference to TS34.108 clause 6.10 Parameter Set 0

- Puncturing Limit - Available Sub Channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number - Sub channel number	Reference to TS34.108 clause 6.10 Parameter Set 0 1 2 3 4 5 6 7 8 9 10 11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flag - <u>Transmission gap pattern sequence configuration parameters</u> - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ~~ITPRMTP~~ - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - ~~Scrambling code change~~ - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - <u>DeltaSIR2</u> - <u>DeltaSIRafter2</u> - TX Diversity mode - SSDT information - S field - Code Word Set	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL SF/2 ~~F/2 Not Present~~ ~~No code change~~ A 2.0 1.0 <u>Not Present</u> <u>Not Present</u> <u>None</u> <u>Not Present</u>
Downlink information for each radio links	Not Present
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - DL Scrambling Code - Signalling Method - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	

- Scrambling code change - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0dB
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
-Uplink DPCH power control info	Reference to TS34.108 clause 6.10 Parameter Set
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE
	Not Present

- Downlink DPCH Offset Value	0
- DPCH compressed mode info	1
- TGPSI	inactive
- TGPS Status Flag	
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
<u>Scrambling code change</u>	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	0dB
- Gain factor •d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info	1
- TGPSI	inactive
- TGPS Status Flag	
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2~~ Not Present
~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor •c	0
- Gain factor •d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0dB
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
-Uplink DPCH power control info -DPCCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	Reference to TS34.108 clause 6.10 Parameter Set
	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	Not Present
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE
	Not Present
	0

- DPCH compressed mode info	1
- TGPSI	inactive
- TGPS Status Flag	
- Transmission gap pattern sequence	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	~~F/2 Not Present~~
~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- <u>Scrambling code change</u>	<u>No change</u>
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor •c	0
- Gain factor •d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	0 0 0dB
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	0.00 Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence</u>	
- <u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~TPRMITP~~	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2 Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRafter2</u>	<u>Not Present</u>
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used

- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- <u>Scrambling code change</u>	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) <u>No change</u>
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	(This IE is repeated for TFC number.)
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor •c	
- Gain factor •d	
- DL DCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence</u>	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~ITPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2 Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- ~~Scrambling code change~~	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	

- Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor •c - Gain factor •d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	inactive
- <u>Transmission gap pattern sequence</u>	
<u>configuration parameters</u>	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ~~ITPRM~~ ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	F/2 Not Present
- ~~Scrambling code change~~	~~No code change~~
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- ~~DeltaSIR2~~	~~Not Present~~
- ~~DeltaSIRafter2~~	~~Not Present~~
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	150
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- ~~Scrambling code change~~	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor •c	
- Gain factor •d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	

- Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00168**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 016

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Clarifications for "paging for notification" test cases

Work item:

Category:

F Correction ☒
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☐
D Editorial modification ☐

(only one category shall be marked with an X)

Release:

Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

In CR-304r1 for TS 25.331 V3.2.0, the message transmission sequence on BCCH during a modification of system information was further clarified. Test cases in clause 8.1.1.4 and 8.1.1.5 were further refined accordingly. The following changes were made to both clauses:

1. The values of "BCCH Modification Time" IE, found in PAGING TYPE 1 messages, were changed to 4088.
2. Edited test description and test sequence parts to explicitly state that the new MIB segment is to be sent by SS at the indicated starting time. This is followed by the transmission of the affected SIB message.
3. Both SIB Type 1 and Type 13 can be used, depending on the supported CN types.

Clauses affected: 8.1.1.4, 8.1.1.5

Other specs affected:

Other 3G core specifications ☐
Other GSM core specifications ☐
MS test specifications ☒
BSS test specifications ☐
O&M specifications ☐

→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

CR-XXX TO 34.108

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8. Layer 3

8 Radio Resource Control RRC

8.1 RRC Connection Management Procedure

8.1.1 Paging

8.1.1.1 Paging for Connection in idle mode

8.1.1.1.1 Definition

8.1.1.1.2 Conformance requirement

In idle mode, UE monitors the paging occasions determined using parameters from SYSTEM INFORMATION BLOCK messages. When the UE receives a PAGING TYPE 1 message transmitted on PCCH during one of its assigned paging occasions, it should attempt to establish an RRC connection.

Reference

3GPP TS 25.331 clause 8.1.2, 3GPP TS 25.211 clause 5.3.3.7, 3GPP TS 25.304 clause 8.

8.1.1.1.3 Test purpose

To confirm that the UE establishes an RRC connection after it receives a PAGING TYPE1 message which includes IE "Paging Record"(UE identity) set to the IMSI of the UE.

8.1.1.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :Idle state with a CN UE identity (set to IMSI).

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched CN UE identity for the UE in the idle state. The UE shall not change its state. The SS transmits a PAGING TYPE1 message, which includes a matched CN UE identity for the UE in the idle state. During transmission of PAGING TYPE 1 messages, SS selects the correct paging indicator on the PICH in order to allow the UE to respond to paging. Then the UE transmits an RRC CONNECTION REQUEST to the SS, the SS transmits an RRC CONNECTION SETUP to the UE. When the UE receives this message, the UE establishes an RRC connection.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See specific message contents.
2		←	PAGING TYPE1	The SS transmits the message, which includes an unmatched identity (incorrect IMSI), then the UE does not change its state.
3		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (test-SIM IMSI).
4		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause – must be "Terminating Call" "Protocol Indicator" – must be FALSE
5		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish an RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE13

Information Element	Value/remark
CN domain system information list CN domain system information - CN domain identity - CHOICE CN Type - CN domain specific NAS system information - CN domain specific DRX cycle length coefficient UE Timers and constants in idle mode - T300 - N300 - T312 - N312	Only 1 entry Supported Domain (PS Domain or CS Domain) Supported CN type Default 2 5 sec. 3 10 sec 200

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list Paging record CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE Identity - IMSI	Only 1 entry CN originator Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified) Supported Domain (PS Domain or CS Domain) IMSI Set to an arbitrary octet string of length 7 bytes which is different from the IMSI value stored in the USIM card.

PAGING TYPE 1 (Step 3)

Information Element	Value/remark
Paging record list Paging record CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE Identity - IMSI	Only 1 entry CN originator Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified) Supported Domain (PS Domain or CS Domain) IMSI Set to the same octet string as in the IMSI stored in the USIM card

8.1.1.1.5

Test requirement

After step 2 the UE shall not transmit on the uplink CCCH in order to establish a RRC connection.

After step 5 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.1.2 Paging for Connection in connected mode (CELL_PCH)

8.1.1.2.1 Definition

8.1.1.2.2 Conformance requirement

In CELL_PCH state, a UE can respond to a paging request from UTRAN. In this case, the UTRAN has requested to establish a connection with the UE. The UE should then attempt to perform a cell update procedure and move to CELL_FACH state in order to respond to the paging using uplink CCCH.

Reference

3GPP TS 25.331 clause 8.1.2

8.1.1.2.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE1 message which indicates that the paging has originated from UTRAN. To verify that the UE performs cell update procedure after entering the CELL_FACH state.

8.1.1.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :CELL_PCH state with a U-RNTI

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched U-RNTI in CELL_PCH state . The UE does not change its state. Then SS transmits a PAGING TYPE 1 message with a matched identifier but originates from the CN instead of UTRAN. The UE should not change state after receiving this message. The SS transmits a PAGING TYPE1 message, which includes a matched U-RNTI in the connected state. Then the UE enters the CELL_FACH state and performs the cell updating procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See specific message contents
2		←	PAGING TYPE1	The SS transmits a message including an unmatched identifier. UE shall not respond to the paging.
3		←	PAGING TYPE1	The SS transmits a message includes a matched identifier but with the originator being the CN, UE shall not respond to the paging.
4		←	PAGING TYPE 1	The SS transmits the message with the UTRAN being the originator and including the UE's assigned U-RNTI
5		→	CELL UPDATE	The UE enters the CELL_FACH state. UE performs cell updating procedure. The CELL UPDATE message shall contain the value "Cell Update Cause" set to "paging response".

Specific Message Contents

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to an arbitrary 16-bit string which is different from the SRNC identity assigned.
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.

PAGING TYPE 1 (Step 3)

Same as the PAGING TYPE 1 message as in Clause 8.1.1.1.4, with the exception that the "BCCH modification info" IE should be omitted in the message.

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	CN originator
- U-RNTI	
- SRNC Identity	Set to the same SRNC identity as previously assigned.
- S-RNTI	Set to the same S-RNTI as previously assigned.

SYSTEM INFORMATION BLOCK TYPE 12

Same as the SYSTEM INFORMATION BLCOK TYPE 13 message used in Clause 8.1.1.1.3.

8.1.1.2.5 Test requirement

After step 2 the UE shall not change its state.

After step 3 the UE shall not change its state.

After step 4 the UE shall enter the CELL FACH state and send a CELL UPDATE message with "Cell Update Cause" IE set to "paging response".

8.1.1.3 Paging for Connection in connected mode(URA_PCH)

8.1.1.3.1 Definition

8.1.1.3.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 1 message from the network to selected UEs in URA_PCH state using the paging control channel (PCCH). The UE listens to it and then enters the CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.1.2

8.1.1.3.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE1 message which includes IE "Paging Record"(U-RNTI) for the UE and which is set to "CN" in IE"paging originator".

8.1.1.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :URA_PCH state with a U-RNTI

Test Procedure

The SS transmits a PAGING TYPE1 message, which includes an unmatched U-RNTI in URA_PCH state. The UE does not change its current state. The SS transmits a PAGING TYPE1 message which includes a matched U-RNTI in the connected state. Then the UE listens to it and enters the CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE1	The SS transmits the message includes an unmatched identifier, then the UE does not change its state.
2		←	PAGING TYPE1	The SS transmits the message includes a matched identifier.
3		→	CELL UPDATE	The UE enters the CELL_FACH state.

Specific Message Contents

PAGING TYPE 1 (Step 1)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to an unused SRNC identity which is different from the SRNC identity assigned.
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list Paging record - CHOICE Paging originator - U-RNTI - SRNC Identity - S-RNTI	Only 1 entry UTRAN originator Set to the previously assigned SRNC identity Set to previously assigned S-RNTI

8.1.1.3.5 Test requirement

After step 1 the UE shall not change its state.

After step 2 the UE shall enter the CELL FACH state, and transmit CELL UPDATE message to initiate the cell updating procedure with the paging cause set to “paging response”.

8.1.1.4 Paging for Notification in idle mode

8.1.1.4.1 Definition

8.1.1.4.2 Conformance requirement

When a system information blocks on the BCCH is modified, the message PAGING TYPE1 can be sent on the PCCH to inform the UE about the changes, which is currently operating in the idle mode. The message includes the IE "BCCH Modification Information".

Reference

3GPP TS 25.331 clause 8.1.1.2

8.1.1.4.3 Test purpose

To confirm that the UE checks the included new value tag of the master information block and reads the updated SYSTEM INFORMATION BLOCK messages after it receives a PAGING TYPE1 message which includes the IE "BCCH Modification Information".

8.1.1.4.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : Idle state with a CN UE identity .

Test Procedure

The UE is in the idle state before it starts to change the SYSTEM INFORMATION BLOCK TYPE 1 or 13 messages. The SS transmits a PAGING TYPE1 message on the paging occasions assigned to the UE. The message shall include the IE "BCCH Modification Information" indicating the starting time when the first modified master BCCH system information block is modified available. Simultaneously Before the stated starting time, SS continuously send broadcast the original MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on the BCCH mapped to BCH transport channel with the "MIB Value Tag" changed. The modified SYSTEM INFORMATION BLOCK TYPE 1 message shall be transmitted continuously too. SS maintains this status until the SFN which corresponds to the starting time is reached. Then it transmits the new master information block followed by the new SYSTEM INFORMATION BLOCK TYPE 1 or 13 messages. In the new SIB TYPE 1 or 13 messages, the IE "DRX Cycle Length Coefficient" is altered when compared with respect to the IE in the original SIB TYPE 1 or 13 messages. The SS shall wait until the stated starting time. At the next paging occasion, SS and transmits a new PAGING TYPE 1 message. The message shall addresses the UE using its IMSI and the "paging cause" IE set to "a terminating call" type supported by the UE. The UE shall react to the PAGING TYPE 1 message and then send a RRC_CONNECTION_REQUEST message to SS.

Notes: For UEs supporting GSM-MAP CN type only, SYSTEM INFORMATION TYPE 1 messages are to be sent by SS in this test case. On the other hand, SS transmits SYSTEM INFORMATION TYPE 13 messages if the UE under test supports only ANSI-41 CN type.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE <u>1 or 13</u>	SS transmits information on BCCH in order for UE to listen to one of the S-CCPCH physical channel, which carries PAGING TYPE 1 <u>or 13</u> messages on PCCH. Relevant paging parameters are also broadcasted.
2		←	PAGING TYPE 1	SS transmits the message includes the IE "BCCH Modification Information", with the "Value Tag" changed from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to 408894 radio frame from the current SFN. <u>SS continuously broadcast the same MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on BCCH for a period stretching 4087 frames.</u>
3		← ←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE <u>1 or 13</u>	SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting. At the same time, SS starts to transmit the affected ~~modified~~ <u>SIB TYPE 1 or 13</u> messages continuously. The value of IE "DRx Cycle Length Coefficient" is changed in this message. <u>SS starts to monitor the uplink RACH after approximately 4087 SFN from step 2.</u>
4		←	PAGING TYPE 1	SS <u>starts to</u> transmits this message continuously on the PCCH according to the new value of "DRx Cycle Length Coefficient", <u>at the next paging occasion immediately following step 3.</u>
~~5~~				~~SS starts to monitor the uplink RACH after approximately 4096 radio frames from step 2.~~
~~65~~		→	RRC CONNECTION REQUEST	UE transmits a request due to answer to the PAGING TYPE 1 received in step ~~54~~ . The IE "Establishment Cause" should be set to "Terminating Call" supported by the UE and the "Initial UE Identity" set to UE's IMSI.
~~76~~		←	RRC CONNECTION REJECT	UE shall return to idle mode after receiving this message

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1 or 13 (Step 1)

Information Element	Value/remark
CN domain system information list	Only 1 entry
CN domain system information	
- CN domain identity	~~Not Present – Use Default~~
- CHOICE CN Type	~~One of the Supported CN types~~
- CN domain specific NAS system information	~~Not Present – Use Default~~
- CN domain specific DRX cycle length coefficient	12
~~UE Timers and constants in idle mode~~	
~~T300~~	~~Default~~
~~N300~~	~~Default~~
~~T312~~	~~Default~~
~~N312~~	~~Default~~

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Arbitrarily selected a SRNC identity which is different from current identity
- S-RNTI Identity	Arbitrarily selected a S-RNTI identity which is different from current identity
BCCH modification info	
MIB Value Tag	2
BCCH Modification time	408894

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 1 or 13 (Step 3)

Information Element	Value/remark
CN domain system information list	Only 1 entry
CN domain system information	
- CN domain identity	~~Not Present – Use Default~~
- CHOICE CN Type	~~One of the Supported CN types~~
- CN domain specific NAS system information	~~Not Present – Use Default~~
- CN domain specific DRX cycle length coefficient	47
~~UE Timers and constants in idle mode~~	
~~T300~~	~~Default~~
~~N300~~	~~Default~~
~~T312~~	~~Default~~
~~N312~~	~~Default~~

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	CN originator
- Paging Cause	Terminating Speech Call
- CN Domain Identity	CS Domain
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI value stored in the USIM card

RRC CONNECTION REJECT (Step 7~~6~~)

Information Element	Value/remark
Initial UE identity	
- CHOICE UE id type	IMSI
- IMSI	Set to the same octet string as in the IMSI value stored in the USIM card
Rejection cause	Unspecified
Wait time	0
Redirection info	Not Present

8.1.1.4.5 Test requirement

After step ~~6~~5 the UE shall transmit RRC CONNECTION REQUEST message in response to the PAGING TYPE 1 messages sent starting from step 4.

8.1.1.5 Paging for Notification in connected mode (CELL_PCH)

8.1.1.5.1 Definition

8.1.1.5.2 Conformance requirement

When a system information block on the BCCH is modified, the message PAGING TYPE1 can be sent on the PCCH to inform the UE about this change in the CELL_PCH state. The message shall include the IE"BCCH Modification Information".

Reference

3GPP TS 25.331 clause 8.1.1, 2

8.1.1.5.3 Test purpose

To confirm that the UE enters the CELL_FACH state, checks the included new value tag of the master information block, and read the SYSTEM INFORMATION messages after it receives a PAGING TYPE1 message which includes the IE"BCCH Modification Information",

8.1.1.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_PCH state with a U-RNTI.

Test Procedure

~~Identical~~ Test steps 1 to ~~5~~4 under in Clause 8.1.1.4 can be applied to this test. However, the PAGING TYPE 1 messages used in step 2 and step 4 need to be altered. The changes are indicated in the specific message content paragraph under this clause. At step 6, UE shall send the CELL UPDATE message indicating the "cell update cause" to be "paging response". SS then replies with a CELL UPDATE CONFIRM message to allow the UE to transit to CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE <u>1 or 13</u>	SS transmits information on BCCH in order for UE to listen to one of the S-CCPCH physical channel, which carries PAGING TYPE 1 <u>or 13</u> messages on PCCH. Relevant paging parameters are also broadcasted.
2		←	PAGING TYPE 1	SS transmits the paging message which comprises IE "BCCH Modification Information", with the "Value Tag" changed from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to ~~4088~~ 94 radio frame from the current SFN. <u>SS continuously broadcast the same MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on BCCH for a period stretching 4087 frames.</u>
3		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE <u>1 or 13</u>	SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting. At the same time, SS starts to transmit the affected ~~modified~~ -SIB <u>TYPE 1 or 13</u> messages continuously. The value of IE "DRx Cycle Length Coefficient" is changed in this message. <u>SS starts to monitor the uplink RACH after approximately 4087 SFN from step 2.</u>
4		←	PAGING TYPE 1	SS transmits this message continuously on the PCCH according to the new value of "DRx Cycle Length Coefficient", <u>at the next paging occasion immediately following step 3.</u> This message shall page the UE with its U-RNTI and setting the UTRAN as the paging originator.
~~5~~				~~SS starts to monitor the uplink RACH after approximately 4096 radio frames from step 2.~~
~~6~~ 5		→	CELL_UPDATE	The IE "Cell Update Cause" should be set to "Paging Response" and the IE "U-RNTI" shall be similar to the UE's U-RNTI value. The "Protocol Error Indicator" IE shall be set to FALSE.
~~7~~ 6		←	CELL_UPDATE CONFIRM	UE shall transit to CELL_FACH state after receiving this message.

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1 or 13 (Step 1)

The content of this message is the same in the message used in step 1 specified in Clause 8.1.1.4.3.

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	
- SRNC Identity	Set to a different string from currently allocated SRNC identity
- S-RNTI	Set to an arbitrary 20-bits string
BCCH modification info	
- MIB Value Tag	2
- BCCH Modification time	408894

MASTER INFORMATION BLOCK (Step 3) and

SYSTEM INFORMATION BLOCK TYPE 1 or 13 (Step 3)

The content of this message is the same in the message used in step 3 specified in Clause 8.1.1.4.3.

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
- CHOICE Paging originator	UTRAN originator
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	Same as the current SRNC allocated
- S-RNTI	Same as the current S-RNTI allocated
BCCH modification info	Not Present

CELL_UPDATE_CONFIRM (Step 7-6)

Information Element	Value/remark
DRX Indicator	DRx with Cell Updating

8.1.1.5.5 Test requirement

After step 6-5 the UE shall transmit a CELL_UPDATE message with “cell update cause” IE set to “paging response”. Upon receiving CELL_UPDATE_CONFIRM message, the UE shall enter the CELL_FACH state.

8.1.1.6 Paging for Notification in connected mode (URA_PCH)

8.1.1.6.1 Definition

8.1.1.6.2 Conformance requirement

When a system information block on the BCCH is modified, the message PAGING TYPE1 can be sent on the PCCH to inform UE about the changes in the URA_PCH state. The message includes the IE “BCCH Modification Information”.

Reference

3GPP TS 25.331 clause 8.1.1, 2

8.1.1.6.3 Test purpose

To confirm that the UE enters the CELL_FACH state, checks the included new value tag of the master information block, reads the SYSTEM INFORMATION after it receives a PAGING TYPE 1 message which includes the IE “BCCH Modification Information”.

8.1.1.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : URA_PCH state with a U-RNTI.

Test Procedure

The UE is in the URA_PCH state before it the SS starts changing SYSTEM INFORMATION BLOCK messages. SS modifies its SYSTEM INFORMATION and updates the "value tag" of both the SYSTEM INFORMATION BLOCK and of the MASTER INFORMATION BLOCK. After a while, the SS transmits a PAGING TYPE 1 message, which includes the IE" BCCH Modification Information". The UE enters the CELL_FACH state and reads the modified SYSTEM INFORMATION BLOCK. The UE shall act according to the modified message. In this testcase, the UE shall adjust it paging occasions and read the new PCCH blocks newly assigned to it under DRX mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION	The SS changes the SYSTEM INFORMATION when the UE is in the connected state (URA_PCH).
2		←	PAGING TYPE 1	SS transmits the message includes the IE"BCCH Modification Information".
3				The UE enters the CELL_FACH state and reads the SYSTEM INFORMATION and then the UE follows this message.

Specific Message Contents

None

8.1.1.6.5 Test requirement

After step 2 the UE shall enter the CELL_FACH state and read the SYSTEM INFORMATION message and follow it.

8.1.1.7 Paging for Connection in connected mode (CELL_DCH)

8.1.1.7.1 Definition

8.1.1.7.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 2 message from the network to selected UEs in CELL_DCH state using the dedicated control channel(DCCH). The UE listens to it and responds to this message accordingly.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.1.7.3 Test purpose

To confirm that the UE responds this message after it receives a PAGING TYPE2 message which includes IE "Paging Record Type Identifier" for the UE.

8.1.1.7.4 Method of test

Initial Condition

System Simulator : 1 cell.

UE : CELL_DCH state

Test Procedure

The SS transmits a PAGING TYPE 2 message which includes a unmatched Paging Record Type Identifier in CELL_DCH state. The UE shall not respond to this message. SS pages the UE again, this time with a matched Paging Record Type Identifier but with the IE"paging cause" set to one of the spare values. UE shall respond by transmitting a RRC STATUS message on the DCCH using RLC-AM mode. Finally, SS transmits a PAGING TYPE 2 message, which includes a matched Paging Record Type Identifier. Then the UE shall responds to this message by the transmission of an upper layer message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE 2	The SS transmits the message includes an unmatched identifier, then the UE does not respond.
2		←	PAGING TYPE 2	The SS transmits the message includes a matched identifier.
3		←	RRC STATUS	The UE shall respond by reporting the protocol error to the SS.
4		←	PAGING TYPE 2	The UE shall respond to the paging message in step 2.
5				The UE shall respond to the paging message in step 2.

Specific Message Contents

PAGING TYPE 2 (Step 1)

Information Element	Value/remark
Paging cause	Terminating Call supported by the UE
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	Unsupported IMSI

PAGING TYPE 2 (Step 2)

Information Element	Value/remark
Paging cause	Use one of the 3 spare values
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	Supported IMSI

RRC STATUS (Step 3)

Information Element	Value/remark
Protocol error information	Checked to see if set to "Information element value not comprehended"

PAGING TYPE 2 (Step 4)

Information Element	Values/Remarks
Paging cause	Terminating Call supported by the UE
CN domain identity	Domain supported by the UE
Paging Record Type Identifier	Supported IMSI

8.1.1.7.5 Test requirement

After step 1 the UE shall not respond to the paging message on the DCCH.

After step 2 the UE shall respond to the paging message by transmitting RRC STATUS on the DCCH, stating the protocol error as "Information element value not comprehended".

After step 4 the UE shall respond to the paging message.

8.1.1.8 Paging for Connection in connected mode (CELL_FACH)

8.1.1.8.1 Definition

8.1.1.8.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 2 message from the network to selected UEs in CELL_FACH state using the dedicated control channel (DCCH). The UE shall listen to it and responds to this message accordingly.

Reference

3GPP TS 25.331 clause 8.1.9

8.1.1.8.3 Test purpose

To confirm that the UE responds this message after it receives a PAGING TYPE 2 message which includes IE "Paging Record Type Identifier" for the UE.

8.1.1.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE :CELL_FACH state.

Test Procedure

The SS transmits a PAGING TYPE 2 message, which includes an unmatched Paging Record Type Identifier in CELL_FACH state. The UE does not respond to this message. The SS transmits a PAGING TYPE2 message which includes a matched Paging Record Type Identifier. Then the UE responds to this message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE2	The SS transmits the message includes a unmatched identifier, then the UE does not respond.
2		←	PAGING TYPE2	The SS transmits the message includes a matched identifier.
3				The UE responds.

Specific Message Content

PAGING TYPE 2 (Step 1)

Use the same message content as in step 1 from 8.1.1.7.4

PAGING TYPE 2 (Step 2)

Use the same message content as in step 4 from 8.1.1.7.4

8.1.1.8.5 Test requirement

After step 1 the UE shall not respond.

After step 2 the UE shall respond.

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 017

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Editorial modifications to "Downlink DPCH info for each radio link" IE

Work item:

Category:

(only one category
shall be marked
with an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

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Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

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Reason for change:

1. "Spreading Factor" IE was found to be missing in "Downlink DPCH info for each RL" IE.
2. "Selection Indicator" IE was found to be missing in "Secondary CCPCH info" IE. Both omissions are rectified in this CR.

Clauses affected:

Annex A

Other specs affected:

Other 3G core specifications
Other GSM core specifications
MS test specifications
BSS test specifications
O&M specifications

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→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

TS 34.108 CR-XXX

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Spreading factor	1
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- TFCI combining indicator	TRUE
- Secondary CCPCH info	
- Selection Indicator	Not Present
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- FACH/PCH information	
- TFS	(PCH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	(FACH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- References to system information blocks	Not Present
- Scheduling information	
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Primary CPICH may be used Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor βc - Gain factor βd - Power offset Pp-m - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	0 -a Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	

- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Primary CPICH may be used Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info	0 -a Not Present Not Present
- <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TECS addition	

information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Primary CPICH may be used Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info	0 -a Not Present Not Present
- <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TECS addition	

information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Not Present
- <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	Not Present Primary CPICH may be used Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code	1

- SSDT Indicator - Spreading factor - Code number	FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI --TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	150
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Not Present Not Present
- <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	Not Present Primary CPICH may be used Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code	1

- SSST Indicator - Spreading factor - Code number	FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00 Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present Primary CPICH may be used Not Present
- <u>Spreading factor</u> - Code number	1 <u>Reference to TS34.108 clause 6.10 Parameter Set</u> SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information	Not Present

- Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 <u>Reference to TS34.108 clause 6.10 Parameter Set</u> SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	

- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
- Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
- Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
- Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Maximum allowed UL TX power	33dBm
- Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Primary CPICH may be used Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	0 -a Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	3
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Spreading factor	100 Not Present
- Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Selection Indicator	Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	3
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Spreading factor	100 Not Present
- Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Selection Indicator	Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(TM DTCH)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) information(Reconfiguration/Addition information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info - DPCCH power offset	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB

- PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 100 Not Present Not Present Primary CPICH may be used Not Present

- DL channelisation code	1
- Secondary scrambling code	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Spreading factor	0
- Code number	-a
- TPC combination index	Not Present
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Selection Indicator	
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCl existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	Not Present
- Normal	
- TFCl Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(DTCH TM)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	(DTCH TM)
RB information to be affected	5
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	3
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	3
- Transport channel identity	1
- Logical channel identity	
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	Not Present Primary CPICH may be used Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	1 <u>Reference to TS34.108 clause 6.10 Parameter Set</u> SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present

- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
DRAC static information	
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	

-DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set - TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set - Not Present 0 (single) - Reference to TS34.108 clause 6.10 Parameter Set - Flexible - TRUE - Not Present 0 1 - inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code	- No code change - A 2.0 1.0 - None - Not Present - Not Present - Not Present 100 - Not Present - Not Present - Primary CPICH may be used - Not Present

- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Spreading factor	
- Code number	1
	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Selection Indicator	
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCSI existence	
- Fixed or Flexible Position	
- Timing offset	
- TFCS	
- Normal	
- TFCSI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	
- Transport channel identity	3
Deleted DL TrCH information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	inactive FDD Measurement 62 $(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$ 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 <u>Reference to TS34.108 clause 6.10 Parameter Set</u> SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to reconfigure	(AM DTCH)
- RB identity	4
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	
- Poll_Windows	
- Downlink RLC mode	
- In-sequence delivery	
- Receiving window size	
- Downlink RLC status info	
- Timer_status_prohibit	
- Timer_EPC	
- Missing PU indicator	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	4
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	3
- Logical channel identity	1
RB information to reconfigure	(TM CCCH for RRC)
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to reconfigure	(UM CCCH for RRC)
- RB identity	6
- PDCP info	Not Present
- RLC info	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 5
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7 Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 6
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM PCCH for RRC) 8 Not Present
- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 PCH 2 1
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE

- TFCl existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCl Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 5 (TM BCCH for RRC)
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	7 Not Present TRUE
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	8 Not Present TRUE
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 PCH 2 1 Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	150
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier	Not Present
- Primary CPICH info - Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Not Present
- <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info	
- <u>Selection Indicator</u>	Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	TRUE Flexible 0 Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256

- TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	0 -a Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS	Not Present

Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	inactive FDD Measurement 62 $(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$ 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 <u>Reference to TS34.108 clause 6.10 Parameter Set</u> SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	Not Present
- CTFC information - CTFC - Gain factor information	

- Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
- Transport channel identity	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Spreading factor - Code number	100 Not Present
	Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Primary CPICH may be used Not Present
	1
	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
	0
	-a
	Not Present
	Not Present
	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Deleted DL TrCH Information	4
- Transport channel identity	1
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
Downlink information common for all radio links	8slot
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	0 -a Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH Information - Transport channel identity	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class Identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor β_c - Gain factor β_d	Not Preaent
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	0
- Addition - TFCS addition	0
information(Reconfiguration/Addtion information)	Not Present
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Not Present
	Not Present
	2
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u>	100 Not Present
- Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	3 (AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 5
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 (TM CCCH for RRC)
RB information to be affected	5
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 1
RB information to be affected	(UM CCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 (TM BCCH for RRC)
RB information to be affected	7
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6 (TM PCCH for RRC)
RB information to be affected	8
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 PCH
RB information to be affected	2
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS - Normal - TFCS Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH Information - Transport channel identity	4
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info - Available Signature - Signature - Signature - Signature	0 1 2

- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present

- DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Selection Indicator	Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to

- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks	TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence - Number of FBI bit - Puncturing Limit	TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info	No code change A 2.0 1.0 None Not Present Not Present Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 Not Present 1 DCH 4 1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks	3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transmission time interval	4
- Type of channel coding	(This IE is repeated for TFI number)
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity	Reference to TS34.108 clause 6.10 Parameter Set
- Time duration before retry	Reference to TS34.108 clause 6.10 Parameter Set
- DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	Not Present
- Power offset Pp-m	
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	

Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present (This IE is needed for 12.2 kbps and 10.2 kbps) 4 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information CPCH SET info Downlink information for each radio links	Not Present Not Present
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2
Frequency info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2
Frequency info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5
Signalling RB information to setup	(TM RLC) TRUE
- RB identity - CHOICE RLC info type - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 5 1
Signalling RB information to setup	(UM CCCH for RRC) 6
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(UM RLC) Max DAT retransmissions 4
Signalling RB information to setup	1 FACH 1 5
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM BCCH for RRC) 7
Signalling RB information to setup	(TM RLC) TRUE
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6
Signalling RB information to setup	(TM PCCH for RRC) 8
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM RLC) TRUE
UL Transport channel information for all transport channels	1 FACH 2 1
- TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information	1 (This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number - Puncturing Limit	0 1 2 3 4 5 6 7 Reference to TS34.108 clause 6.10 Parameter Set 0 Reference to TS34.108 clause 6.10 Parameter Set

- Available Sub Channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present
- Primary CPICH info	
- Primary scrambling code	
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	
- DL Scrambling Code	
- Signalling Method	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	

- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Added or Reconfigured DL TrCH information	0
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	0dB
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
-Uplink DPCH power control info	Reference to TS34.108 clause 6.10 Parameter Set
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	0.00
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	Flexible
	TRUE
	Not Present

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number	100 Not Present Not Present Primary CPICH may be used Not Present 1 <u>Reference to TS34.108 clause 6.10 Parameter Set</u> SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Primary CPICH may be used Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	0 -a Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
-spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code	Not Present
- <u>Spreading factor</u> - Code number	1 Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	0 -a Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor βc	
- Gain factor βd	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor βc	0dB
- Gain factor βd	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	2
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set

- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier	100 Not Present

- TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u> - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u> - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 <u>Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)</u> 0 -a Not Present Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u>	100 Not Present
- Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	<u>Not Present</u> Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- CTFC information - CTFC	

- Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - <u>Spreading factor</u>	150 Not Present
- Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - <u>Selection Indicator</u>	Not Present Not Present
- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	<u>Not Present</u> Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- CTFC information - CTFC	

- Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 018

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Updates to measurement-related IEs, messages and test procedures

Work item:

Category:

(only one category shall be marked with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

In CR-393 for TS 25.331 V3.2.0, the measurement-related changes introduced together with the affected areas in TS 34.123-1 are listed in the following paragraphs:

1. Renaming of "unlisted cells set" to "detected cells set". The default MEASUREMENT CONTROL message in Annex A and clause 8.4.1.X is modified.
2. The need requirement for "Reporting interval" IE in "Periodical reporting criteria" IE was changed from OP to MP. The "Reporting interval" IE found in MEASUREMENT CONTROL message in Annex A is set to 64 seconds – the lowest reporting rate.
3. It was explicitly stated that UE shall not resume any intra-frequency measurement when transiting from CELL_FACH to CELL_DCH state if a cell re-selection occurs whilst out of CELL_DCH state. Extra test steps are inserted into clause 8.4.1.7 to test this requirement.

In addition, some other changes are proposed here:

4. Some messages in the "Specific Message Content" part clause 8.4.1.X were found to be misaligned. These errors are rectified in this CR.

In CR-289r2 for TS 25.331 V3.2.0, "Reporting Threshold" IE was removed from "Intra-frequency measurement reporting criteria" IE as this conflicts with the threshold proposed in another CR (CR-324). The affected clauses of the 4 test cases were revised.

Also, in the case of intra-frequency measurement reporting for event 1e and 1f, "Hysteresis" IE is not necessary. Hence, in clause 8.4.1.1 and 8.4.1.7, this IE was omitted from the MEASUREMENT CONTROL and SIB11 messages.

In CR-415r1 for TS 25.331 V3.2.0, "CFN-SFN observed time difference" IE was made optional for both FDD and TDD mode UEs. This change caused a rearrangement of

the IEs in "Cell measured results" IE. The necessary modifications in TS 34.123-1 V3.0.0 were presented in this CR.

Clauses affected: 8.4.1.X, Annex A

**Other specs
affected:**

Other 3G core specifications
Other GSM core specifications
MS test specifications
BSS test specifications
O&M specifications

X

→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

CR-XXX to TS 34.108

**Other
comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.4.1 Measurement Control and Report

8.4.1.1 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.1.1 Definition

8.4.1.1.2 Conformance requirement

After a state transition from idle mode to CELL_DCH state, the UE shall continue to monitor the list of neighbouring cells which is specified in the SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages on BCCH. The UE shall send a MEASUREMENT REPORT message when reporting criteria are satisfied. During CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, it shall terminate existing monitoring activities for the neighbouring cells previously known from SYSTEM INFORMATION BLOCK TYPE 11 (or 12) messages. It shall perform the measurement and reporting tasks based on the latest MEASUREMENT CONTROL message received.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.1.3 Test Purpose

To confirm that the UE continue to monitor CPICH RSCP measurement quantity of the neighbour cells after it has entered the CELL_DCH state from idle mode. When the criteria specified in BCCH have been met, it shall report the measurements to the SS using MEASUREMENT REPORT messages. To confirm that in CELL_DCH state, the UE respond to a modification of measurement criteria and adjust its measurement and reporting mechanism accordingly. To confirm that the UE terminates monitoring and measurement activities for the neighbour cells found in SYSTEM INFORMATION BLOCK TYPE 11 (or 12) message, after it has received a MEASUREMENT CONTROL message which specifies the measurement type to be "intra-frequency measurement". To confirm that the UE restart the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.

8.4.1.1.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and the downlink P-CPICH has a transmission level (RSCP) of – 40 dBm, cell 2 is also active but with a P-CPICH transmission power 10dB below cell 1.

UE : idle state after having successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 11 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = "intra-frequency measurement", measurement quantity = "CPICH RSCP", report criteria = "periodic reporting criteria", reporting interval = "12 seconds".

SS pages the UE with the cause "Incoming circuit-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates uplink and downlink DPDCH physical resources to the UE. UE then moves to CELL_DCH state. After approximately 12 seconds, the UE shall transmit a MEASUREMENT REPORT message with measurement readings from cell 2. SS waits for 25 seconds after the sending of RRC CONNECTION SETUP message to verify that 2 consecutive MEASUREMENT REPORT messages are received.

Then SS modifies the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages. The measurement parameters for cell 2 are changed in the following manner: report criteria = "event-trigger", event identity = "1f", reporting threshold = "-65 dBm". SS then begins to decrease the transmission power of P-CPICH in cell 2 progressively at the rate of 0.5dB/sec. SS checks to see that no

MEASUREMENT REPORT messages are sent within the next 12 seconds (which is due to periodic reporting). The UE shall detect this change and discontinue the periodic reporting of RSCP value estimation from cell 2. After approximately 35 seconds later, the UE shall transmit MEASUREMENT REPORT message to indicate that the RSCP of cell 2 has reached the threshold specified. In this message, the correct measurement identity shall be stated. Finally, SS sends a MEASUREMENT CONTROL message to request a periodic reporting of measurement quantity P-CPICH Ec/No from cell 2. The reporting interval is set to 32 seconds. Within the MEASUREMENT CONTROL message, a new measurement identity is assigned. After receiving this message, the UE shall stop reporting quantity P-CPICH RSCP of cell 2. Moreover, the UE shall start to transmit MEASUREMENT REPORT messages with the contents pertaining to new measurement identity on cell 2's P-CPICH Ec/No.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 11	The UE is idle mode and camped onto cell 1. Cell 2 is also active but the P-CPICH has a RSCP 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		→	RRC CONNECTION SETUP	SS allocates DPCH physical channels to UE
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_DCH state.
6		→	MEASUREMENT REPORT	SS waits for 25 seconds. It shall receive 2 consecutive MEASUREMENT REPORT messages
7		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	SS modifies the contents of system information, so that measurement for cell 2 is changed to "event trigger" with "event identity" set to 1f. SS then reduces the transmission power of cell 2's P-CPICH progressively by 0.5dB/sec.
8				SS monitors the DCCH for the next 12 seconds to make sure that no further MEASUREMENT REPORT messages are transmitted.
9		→	MEASUREMENT REPORT	UE shall transmit this message approximately 35 seconds after step 7, as its internal estimation of the RSCP of cell 2 has dropped below the threshold.

10	←	MEASUREMENT CONTROL	A new measurement identity is assigned, with the reporting quantity changed to cell 2's P-CPICH Ec/No
11	→	MEASUREMENT REPORT	SS verifies that UE transmits MEASUREMENT REPORT messages periodically to report the P-CPICH Ec/No value of cell 2.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 11 (Step 1)

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	1
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-115dB
- Qrxlevmin	-20dB
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	FALSE
- CPICH Ec/No	TRUE
- CPICH RSCP	
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted~~ detected cells	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	12 seconds
- Inter-frequency measurement system information	Not present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	Not Present

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content, which is marked as "Transition to CELL_DCH".

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 1
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- CFN-SFN observed time difference	<u>Check to see if this IE is absent</u>
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if within acceptable range
- Pathloss	Check to see if this IE is absent
- ~~CFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
Event Results	Check to see if this IE is absent

MASTER INFORMATION BLOCK (Step 7)

Information Element	Value/Remarks
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 12 (Step 7)

Information Element	Value/Remark

Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	2
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	FALSE
- CPICH Ec/No	TRUE
- CPICH RSCP	
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted-detected~~ cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	Event type 1f
- Intra-frequency event identity	Monitored set cells
- Triggering condition	Not present
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- W	~~-0.5dB~~ Not Present
- Hysteresis	-65dBm
- Threshold Used Frequency	Not present
- Reporting deactivation threshold	Not present
- Replacement activation threshold	~~-65dBm~~
- ~~Reporting Threshold~~	0
- Time to trigger	Infinity
- Amount of reporting	8 seconds
- Reporting Interval	Not Present
- Reporting Cell Status	Not present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	Not Present

~~[Editor's Note] IE "Threshold Used Frequency" (originated from CR 324) and IE "Reporting Threshold" (originated from CR 289r1) are basically similar in function, it is not clear whether one should be removed.~~

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 2
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- CFN-SFN observed time difference	<u>Check to see if this IE is absent</u>
- SFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check value to see if this is below threshold value specified
- Pathloss	Check to see if this IE is absent
~~- CFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
Event Results	
- Intra-frequency event identity	Check to see if this is set to event '1f'
- Cell measured event results	
- Primary CPICH Info	
- Primary scrambling code	Check to see if it's set to cell 2's assigned scrambling code

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	Same as in default message content
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted~~ <u>detected</u> cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds

MEASUREMENT REPORT (Step 11)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 3
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- ~~CFN-SFN observed time difference~~	<u>Check to see if this IE is absent</u>
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- ~~CFN-SFN observed time difference~~	<u>Check to see if this IE is absent</u>
Event Results	Check to see if this IE is absent

8.4.1.1.5

Test Requirement

After step 5 the UE shall start to transmit MEASUREMENT REPORT message. The measurement quantity "CPICH RSCP" shall be reported to the SS at 12 seconds interval.

After step 7 UE shall not transmit any MEASUREMENT REPORT messages within 12 seconds after SS has modified the MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK TYPE 12 messages.

The UE shall transmit a MEASUREMENT REPORT message roughly 35 seconds after step 7, to report that the RSCP value for cell 2 has dropped below the threshold.

After step 10 the UE shall transmit MEASUREMENT REPORT messages at 32 seconds interval, with the IE "Measurement Identity" set to 3. The message shall also include an estimation of cell 2's P-CPICH Ec/No value.

8.4.1.2 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.2.1 Definition

8.4.1.2.2 Conformance requirement

After entering CELL_DCH state from idle mode, the UE shall discontinue the monitoring of the list of neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages on BCCH.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.2.3 Test Purpose

To confirm that the UE terminates the monitoring of the list of neighbouring cell assigned in the IE "inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, after it enters CELL_DCH state from idle mode.

8.4.1.2.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a downlink transmission level (RSCP) of –50 dBm, cell 2 is also active but with a transmission power 20dB below cell 1. The carrier frequency of cell 2 in the uplink direction is 1 UARFCN above that of cell 1, and the downlink carrier is 1 UARFCN below that of cell 1.

UE : idle state by has successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH RSCP".

SS pages the UE with the cause "Incoming circuit-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocate uplink and downlink DPDCH physical resources to the UE. UE then moves to CELL_DCH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from cells belonging to the monitored set.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 20dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		→	RRC CONNECTION SETUP	SS allocates DPDCH physical channels to UE, using compressed mode format
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the RRC CONNECTION SETUP message and moves to CELL_DCH state.
6				SS raises the transmission power of cell 2 by 10dB. SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	~~Not Present~~
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	Set to the next uplink UARFCN after cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20 dB, -115dBm
- Inter-frequency measurement quantity	
CHOICE Reporting criteria	Inter-frequency reporting criteria
- Filter coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	2.0dB
- Hysteresis	0 sec
- Time to trigger	Infinity
- Amount of reporting	0
- Reporting interval	Not Present
- Parameters required for each non used frequency	
- Threshold non-used frequency	-55dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content which is marked as "Transition to CELL_DCH", with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- Scrambling code change	2.0
- Downlink frame type	1.0
- DeltaSIR	
- DeltaSIRAfter	

8.4.1.2.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity from cell 2.

8.4.1.3 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

During a transition from idle mode to CELL_FACH state, the UE shall start to monitor neighbouring cells listed in the IE "Intra-frequency cell info" received in SYSTEM INFORMATION BLOCK TYPE 12 (or 11). If a measurement report criteria is also specified, the UE shall store this information and apply these rules when deciding to transmit MEASUREMENT REPORT messages during a subsequent transition to CELL_DCH state. If reporting during RACH transmissions are dictated by the UTRAN, the UE shall append the relevant measurement information when sending messages on RACH (e.g. RRC CONNECTION REQUEST and CELL UPDATE).

Reference

3GPP TS 25.331, clause 8.4.1.9

8.4.1.3.3 Test Purpose

To confirm that the UE begins to monitor the neighbouring cells in the monitored list after it has entered the CELL_FACH state. The list of neighbouring cell can be known from SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages. If information regarding the intra-frequency measurement report criteria is also broadcasted, the UE shall save this information and apply the criteria during a subsequent transition to CELL_DCH state. If RACH measurement reporting is dictated in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, the UE shall include these measurements when transmitting on the RACH channel.

8.4.1.3.4 Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active. Cell 2 is transmitting at 15 dB below cell 1.

UE : idle state and camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters are as follow: measurement type = “intra-frequency measurement”, measurement quantity = “CPICH Ec/No”, report criteria = “periodic reporting criteria”, reporting interval = “12 seconds”. In the system information message, reporting of CPICH Ec/No is also required for intra-frequency reporting when transmitting RACH messages to cell 1.

SS pages the UE with the cause “Incoming packet-switched call”. The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH (FACH) physical channels for uplink and downlink use. UE shall then enter CELL_FACH state. SS waits until timer T305 expires, the UE shall send a CELL UPDATE message including the measurement reading of cell 2's CPICH Ec/No values. SS then reply with CELL UPDATE CONFIRM message without changing the physical channel resources.

In the next sequence, SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates DPDCH channels to the UE. The UE shall transit to CELL_DCH state and send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcasted on SYSTEM INFORMATION BLOCK TYPE 12 (or 11) when the UE was still in idle mode.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 2, SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 15dB below that of cell 1. SYSTEM INFORMATION TYPE 2 and 12 to be transmitted are different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE, stating the cause as an incoming packet-switched call.
3		→	RRC CONNECTION REQUEST	The Ec/No value of P-CPICH of Cell 1 should be reported.
4		←	RRC CONNECTION SETUP	SS allocates common physical channels to UE.
5		→	RRC CONNECTION COMPLETE	UE shall enter CELL_FACH state, transmits this message to acknowledge the SETUP message.

6			SS waits for 5 minutes (for the expiry of T305 timer), so that UE will initiate a periodic cell updating procedure.
7	→	CELL UPDATE	This message shall contain measurement readings of CPICH Ec/No for cell 1.
8	←	CELL UPDATE CONFIRM	SS does not change the physical channel allocation.
9	←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns DPCH physical resources to the UE, but keeping parameters for transport channels and RBs unchanged.
10	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state after sending this message.
11	→	MEASUREMENT REPORT	UE shall begin to report cell 2's CPICH Ec/No value periodically at 12 seconds interval. The measurement identity shall match that broadcasted in step 1

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 2

Information Element	Value/Remarks
UE Timers and constants in connected mode - T305	5 minutes.

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	
FACH measurement occasion info	
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	5
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference	FALSE
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference	TRUE
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~monitored~~ <u>detected</u> set cells	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	12 seconds
- Reporting Cell Status	Not Present
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	

PAGING TYPE 1

Information Element	Value/Remarks
Paging record list - Paging Record - CHOICE Paging originator - Paging cause - CN domain identity - CHOICE UE identity - IMSI (DS-41)	CN Originator Terminating PS Data Call, PS Domain IMSI (DS-41) Set to the same IMSI (DS-41) digits found in the test USIM.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Initial UE Identity Establishment cause Measured results on RACH - Measured result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measured results for monitored cells	Check to see if it is the same as in PAGING TYPE 1 message Check to see if set to "Paging Response" Check to see if value is present Check to see if this IE is absent

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell update cause Protocol error indicator Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No - Measurement results for monitored cells Protocol error information	Check to see if set to same U-RNTI value assigned in RRC CONNECTION SETUP message. Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'Periodic cell updating' Check to see if set to 'FALSE' CPICH Ec/No Checked to see if set to within an acceptable range. Checked to see if this IE is not present. Check to see if set to 'FALSE'

PHYSICAL CHANNEL RECONFIGURATION

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH".

MEASUREMENT REPORT

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is within acceptable range
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

8.4.1.3.5 Test Requirement

After step 3 the UE shall send RRC CONNECTION REQUEST message in response to the paging message sent by the SS, which includes reading of the current cell's CPICH Ec/No value.

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages.

After step 6 the UE shall initiate cell updating procedure by transmitting CELL UPDATE message. In this message, the cause shall be set to "periodic cell updating". It shall include measurement readings for the current cell (cell 1) CPICH Ec/No measurement quantity.

After step 10 the UE shall move to CELL_DCH state and transmit MEASUREMENT REPORT messages at 12 seconds interval. In these messages, neighbouring cell 2's CPICH Ec/No value shall be reported. The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in SYSTEM INFORMATION BLOCK TYPE 12 messages transmitted in step 1.

8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.4.1 Definition

8.4.1.4.2 Conformance requirement

After entering CELL_FACH state from idle mode, the UE shall start to monitor the list of "inter-frequency" neighbouring cells assigned in the SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages on BCCH/FACH.

Reference

3GPP TS 25.331, clause 8.4.1.10

8.4.1.4.3 Test Purpose

To confirm that the UE begins to monitor the list of neighbouring cell assigned in the IE "inter-frequency cell info" in SYSTEM INFORMATION BLOCK TYPE 12 (or 11) messages, after it enters CELL_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

8.4.1.4.3 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and has a downlink transmission level for CPICH RSCP at -40 dBm, cell 2 is also active but with a transmission power 10dB below cell 1. The carrier frequency of cell 2 in

the uplink direction is 1 UARFCN above that of cell 2, and the downlink carrier is 1 UARFCN below that of cell 1.

UE : idle state and has successfully camped onto cell 1.

Test Procedure

The UE is initially at idle mode and has selected cell 1 for camping. The SYSTEM BLOCK TYPE 12 message is modified with respect to the default settings to prevent reporting of CFN-SFN difference and also to include cell 2 into the monitored neighbour cell list for inter-frequency measurement type. The key measurement parameters are as follow: measurement type = "inter-frequency measurement", measurement quantity = "CPICH Ec/No".

SS pages the UE with the cause "Incoming packet-switched call". The UE shall transmit a RRC CONNECTION REQUEST message on the CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH channel in the uplink and S-CCPCH(FACH) channel on the downlink to the UE. UE then moves to CELL_FACH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings from inter-frequency cells belonging to the monitored set. SS decreases the transmission power of CPICH in cell 1 by 10dB. At the same time, it raises the corresponding downlink transmission power of cell 2 by 10dB. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to report this event. Upon receiving this message, SS replies with the default CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 12	The UE is idle mode and camped onto cell 1. Cell 2 is also active but has transmission power 10dB below that of cell 1. SYSTEM INFORMATION TYPE 12 to be transmitted is different from the default settings (see specific message contents)
2		←	PAGING TYPE 1	SS sends this message to page for the UE.
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	SS allocates PRACH and S-CCPCH resources to UE
5		→	RRC CONNECTION COMPLETE	UE transmits this message to acknowledge the SETUP message and moves to CELL_FACH state.
6				SS checks to see that no MEASUREMENT REPORT messages are sent from UE to cell 1.
7				SS decreases the transmission power of cell 1 by 10dB and increases cell 2's downlink power by 10dB.
8		→	CELL UPDATE	UE shall detect that cell 2 has become stronger than cell 1. It sends this message after reselecting to cell 2
9		←	CELL UPDATE CONFIRM	Use default message.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

SYSTEM INFORMATION BLOCK TYPE 12

clauseInformation Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-frequency measurement identity number	1
- Inter-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	Set to the next uplink UARFCN after cell 1
- UARFCN downlink (Nd)	Set to the previous downlink UARFCN before cell 1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info for SIB 11/12	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-frequency measurement quantity	
CHOICE Reporting criteria	Inter-frequency reporting criteria
- Filter coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	2.0dB
- Hysteresis	0 sec
- Time to trigger	Infinity
- Amount of reporting	0
- Reporting interval	Not Present
- Parameters required for each non used frequency	
- Threshold non-used frequency	-55dBm
- W non-used frequency	0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

PAGING TYPE 1

For this message, use the same message contents as in step 2 of clause 8. 4.1.3.3.

RRC CONNECTION REQUEST

Information Element	Value/Remarks
Establishment cause	Check to see if set to "Paging Response":
Measured results on RACH	Check to see if this IE is absent

RRC CONNECTION SETUP

Use the message sub-type in default message content defined in TS 34.108 Clause 8, which is marked as "Transition to CELL_FACH".

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the message sub-type in default message content defined in TS 34.108 Clause 8.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH Ec/No quantity for cell 2.

After step 7 the UE shall reselect to cell 2 and transmit a CELL UPDATE message on the uplink CCCH of cell 2.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.5.1 Definition

8.4.1.5.2 Conformance requirement

After entering CELL_FACH state from CELL_DCH state, the UE shall terminate intra-frequency type measurement reporting originating from a previous MEASUREMENT CONTROL message. If indicated in the system information messages, the UE shall start to monitor neighbouring cells. The UE shall apply the reporting criteria specified in system information during a subsequent return to CELL_DCH state. If requested to perform measurement reporting on RACH channels, the UE shall append the measured results when transmitting uplink RACH messages.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.5.3 Test Purpose

To confirm that the UE ceases to perform intra-frequency measurement specified in a previously received MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state. To confirm that the UE read the system information when in CELL_FACH state and starts to monitor the neighbouring cells as indicated in system information messages. To confirm that the UE performs measurements on uplink RACH channel and append the measured results in RACH messages, when requested in the system information messages.

8.4.1.5.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, but the transmitter of cell 3 is switched off. Cell 1 is transmitting its CPICH (RSCP) at 20 dB above cell 2. The downlink UTRA carriers transmission strength for cell 1 is identical to that of cell 2.

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode and has selected cell 1 as the current cell. SYSTEM INFORMATION BLOCK TYPE 12 message is modified from its default message contents, in order to prevent the reporting of CFN-SFN difference. No measurement requirements are specified for the UE in system information block (type 11 and 12) messages.

SS then prompts the test operator to initiate an outgoing call. When UE transmits a RRC CONNECTION REQUEST message on RACH, SS replies with RRC CONNECTION SETUP message. Uplink and downlink DPDCH physical channels are allocated. Upon receiving RRC CONNECTION SETUP message, the UE shall transmit RRC CONNECTION SETUP COMPLETE message on DCCH and then moves to CELL_DCH state. SS then sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement, based on an estimation of cell 2's CPICH Ec/No. At the same time, reporting of cell 2's CPICH is commanded with the reporting criteria set to "periodic reporting" and reporting interval set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message, triggering a switch of transport channels from DCH/DCH to RACH/FACH. After receiving this message, the UE shall reconfigure itself and replies with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS acknowledges this message and the UE shall move to CELL_FACH state and read the system information messages. SS monitors the uplink to verify that no MEASUREMENT REPORT messages are received. In SYSTEM INFORMATION BLOCK TYPE 12 message, SS includes cell 3 into the neighbour cells monitoring list. IE "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in this message. An event-triggered (event type 1a) reporting criterion is specified for intra-frequency measurements. The transmission strength of CPICH for cell 3 is increased until it exceeds the lower bound of the reporting range specified. SS then pages for the UE using PAGING TYPE 1 message. The UE shall respond with a CELL UPDATE message, which comprises CPICH Ec/No measurements for cell 1 and 3. Upon the receipt of CELL UPDATE message, SS replies with CELL UPDATE CONFIRM message. This message does not change the physical resource nor allocate any new RNTI identities. The UE shall remain in CELL_FACH state. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, this time specifying dedicated physical resources for both uplink and downlink direction. The UE shall then send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages. SS verifies that all messages received pertain to the periodic measured value of cell 2's CPICH Ec/No value. UE shall not send any reports containing the measured values of cell 3.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and test operator is asked to make an outgoing call.
2		→	RRC CONNECTION REQUEST	
3		←	RRC CONNECTION SETUP	Uplink and downlink DPCH resources are allocated.
4		→	RRC CONNECTION SETUP COMPLETE	UE shall move to CELL_DCH state.
5		←	MEASUREMENT CONTROL	SS requests for measurement and reporting of cell 2's CPICH Ec/No value.
6		→	MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval. SS waits for 2 consecutive reports before proceeding to step 7.
7		←	PHYSICAL CHANNEL RECONFIGURATION	SS switches the physical resources to common physical channels.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall reconfigure its uplink and downlink channels before transiting to CELL_FACH state.
9		←	SYSTEM INFORMATION BLOCK TYPE 12	SS includes cell 3 into the monitored neighbour cell list. SS waits for 1 minutes and verifies that no MEASUREMENT REPORT messages are received. Cell 3 is switched on, and SS adjusts the transmission power for CPICH such that its Ec/No falls into the report range specified.
10		←	PAGING TYPE 1	SS pages for UE using the assigned U-RNTI identity.
11		→	CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and 3 appended.
12		←	CELL UPDATE CONFIRM	No change in physical resource allocation and RNTI identities.
13		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates dedicated physical channels.
14		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
15		←	MEASUREMENT REPORT	UE shall continue to report cell 2's CPICH Ec/No value on a periodic basis.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Transition to CELL_DCH”.

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	5
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted~~ <u>detected</u> cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 5
Measurement Results	
- CHOICE measurement	Check to see if set to “Intra-frequency measured results list”
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- ~~CFN-SFN observed time difference~~	<u>Check to see if this IE is absent</u>
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- ~~CFN-SFN observed time difference~~	<u>Check to see if this IE is absent</u>
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “Packet to CELL_FACH from CELL_DCH in PS)”

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	6
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	TRUE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted~~ <u>undetected</u> cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	Only 1 reporting event is defined
- Intra-frequency event identity	1a
- Triggering condition	Monitored set cells
- Reporting range	10.0 dB
- Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- ~~Reporting Threshold~~	Not Present
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting Interval	8 seconds
- Inter-frequency measurement system information	Not present
- Inter-system measurement system information	Not present
- Traffic volume measurement system information	
- UE internal measurement system information	Not present

~~[Editor's Note] IE "Threshold Used Frequency" (originated from CR 324) and IE "Reporting Threshold" (originated from CR 289r1) are basically similar in function, it is not clear whether one should be removed.~~

PAGING TYPE 1

Information Element	Value/Remarks
Page Record List - Page Record - CHOICE Paging originator - U-RNTI	UTRAN Originator Set to same U-RNTI value as assigned in the RRC CONNECTION SETUP message
BCCH modification info	Not Present

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in PAGING TYPE 1 message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to "Paging Response"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH - Measurement result for current cell - CHOICE measurement quantity - CPICH Ec/No	Check to see if set to CPICH Ec/No Check to see if it is within acceptable range
- Measurement results for monitored cells	Not Checked
- SFN-SFN observed time difference	
- Primary CPICH info	
- Primary scrambling code	Check to see if the same as cell 3's code.
- CHOICE measurement quantity	Check to see if set to CPICH Ec/No
- CPICH Ec/No	Check to see if it is within acceptable range
Protocol error information	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH in PS)"

MEASUREMENT REPORT (Step 15)

The contents of this message should be the same as in step 6.

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain the measured result of cell 2's CPICH Ec/No value.

After step 8, the UE shall not send any MEASUREMENT REPORT messages which report quantities requested in MEASUREMENT CONTROL messages in step 5.

After step 10, the UE shall respond to the paging and transmit a CELL UPDATE message. In this message, the measured values CPICH Ec/No for cell 1 and cell 3 shall be included.

After step 14, the UE shall revert to the original measurement reporting mechanism and send MEASUREMENT REPORT messages containing estimates for cell 2's CPICH Ec/No value. The UE shall not transmit any MEASUREMENT REPORT messages, which indicate measurement quantities of cell 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

When transiting from CELL_DCH state to CELL_FACH state, the UE shall terminate all reporting activities related to inter-frequency measurements. After reaching CELL_FACH state, the UE shall begin to monitor neighbouring cells listed in the IE "inter-frequency cell info" of the system information type 12 message.

Reference

3GPP TS 25.331, clause 8.4.1.7

8.4.1.6.3 Test Purpose

To verify that UE ceases to transmit MEASUREMENT REPORT messages when moving from CELL_DCH state to CELL_FACH, even if it has detected that reporting criteria have been satisfied in CELL_FACH state. To verify that the UE extracts information for inter-frequency measurement from system information messages after reaching CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

SS: 2 cells – Cell 1 is active while cell 2 is inactive. Cell 2 is allocated a frequency which is 1 UARFCN away from cell 1 in both uplink and downlink directions. The applicable radio conditions for cell 1 and cell 2 are as follow:

	Cell 1	Cell 2
UARFCN (N_u and N_d)	Channel 1	Channel 2
CPICH RSCP	-75 dBm	-85 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm
S	15	5

UE: idle state and camped onto cell 1.

Test Procedure

The UE is initially in idle mode. SS pages the UE with the establishment cause set to "Terminating PS Data Call". The SYSTEM INFORMATION TYPE 12 message is modified so that no measurement tasks are to be performed by the UE. The UE shall respond to the paging by sending a RRC CONNECTION REQUEST message on the PRACH. Upon receiving this message, SS allocates dedicated DPDCH physical channels to the UE by transmitting RRC CONNECTION SETUP message. The UE shall reply by transmitting a RRC CONNECTION SETUP COMPLETE message. SS then checks the IE "Measurement Capability" of this message and verifies that the UE is capable of performing inter-frequency measurements under FDD mode. After the confirmation of the UE inter-frequency measurement ability, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, information related to the radio bearers and uplink/downlink radio resources remain unchanged as compared to the equivalent IEs found in RRC CONNECTION SETUP message. The only difference concerns IE "DPCH compressed mode info", which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS then send a MEASUREMENT CONTROL message to the UE, specifying that cell 2 be the measurement object for inter-frequency type measurement. The periodic reporting criterion is selected for this measurement. SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing measured result of cell 2's reporting quantity (CPICH E_c/N_0). SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, requesting the UE to switch its uplink and downlink DPDCH to common physical channels. The UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then moves to CELL_FACH state. SS waits for another 8 seconds to detect any possible uplink MEASUREMENT REPORT messages as a result of inter-frequency measurements. SS then increases the transmission power of cell 2 by 20 dBm. SS waits for [x] seconds to allow the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message

on the uplink CCCH of cell 2, specifying the cause as “cell re-selection”. SS replies with CELL UPDATE CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in idle mode and camped onto cell 1. SYSTEM INFORMATION BLOCK TYPE 12 is redefined, disabling all measurement and reporting activities.
2		←	PAGING TYPE 1	SS pages UE with cause set to “incoming circuit-switched call”
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	Uplink and downlink DPDCH resources are allocated.
5		→	RRC CONNECTION SETUP COMPLETE	UE shall indicate that it's capable of performing inter-frequency measurement for FDD mode.
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall enter CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that cell 2 be monitored. SS waits for 8 seconds.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 2's CPICH Ec/No value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS changes the physical channel allocation to common channel configuration.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
12				SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected.
13				SS changes SYSTEM INFORMATION BLOCK TYPE 12 message to request that cell 2 be included in neighbour cell list for inter-frequency measurements.
14				SS increases the transmission power of cell 2 by 20 dBm, and then wait for a [x] seconds to allow the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall detect that cell 2 has become the best cell and then perform cell re-selection procedure.
16		←	CELL UPDATE CONFIRM	SS acknowledges the cell 2 is updated.

Notes:

The value [x] seconds is TBD, after the cell re-selection duration is determined from TS 25.304.

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE Internal measurement system information	Not Present

PAGING TYPE 1

Information Element	Value/Remarks
Paging Record List	
- Paging Record	
- CHOICE Paging originator	CN Originator
- Paging cause	Terminating PS Data Call
- CN domain identity	CS Domain
- CHOICE UE Identity	IMSI (DS-41)
- IMSI (DS-41)	Set to the same value as in USIM card
BCCH modification info	Not Present

RRC CONNECTION SETUP

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Transition to CELL_DCH"

RRC CONNECTION SETUP COMPLETE

Information Element	Value/Remarks
Hyperframe Number	Not checked.
UE Radio access capability	
- Conformance test compliance	Checked to see if set to 'R99'
- PDCP capability	Not checked.
- RLC capability	Not checked.
- Transport channel capability	Not checked.
- RF capability	Not checked.
- Physical channel capability	Not checked.
- UE multi-mode/multi-RAT capability	Not checked.
- Security capability	Not checked.
- LCS capability	Not checked.
- Measurement capability	
- FDD measurements DL	Checked to see if set to 'TRUE'
- TDD measurements DL	Not checked.
- GSM measurements DL	Not checked.
- GSM 900 DL	Not checked.
- DCS 1800 DL	Not checked.
- GSM 1900 DL	Not checked.
- Multi-carrier measurement DL	Not checked.
- FDD measurements UL	Checked to see if set to 'TRUE'
- TDD measurements UL	Not checked.
- GSM measurements UL	Not checked.
- GSM 900 UL	Not checked.
- DCS 1800 UL	Not checked.
- GSM 1900 UL	Not checked.
- Multi-carrier measurement UL	Not checked.
UE system specific capability	Not checked.

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- Scrambling code change	2.0
- Downlink frame type	1.0
- DeltaSIR	
- DeltaSIRAfter	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/Remark
Measurement Identity Number	15
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 2
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 15
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 2
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 2
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if it is absent
- CFN-SFN observed time difference	<u>Check to see if it is absent</u>
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	<u>Check to see if it is absent</u>
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled “(Packet to CELL_FACH from CELL_DCH in PS”.

CELL UPDATE

Information Element	Value/Remarks
U-RNTI	Check to see if same to value as in RRC CONNECTION SETUP message
Integrity check info	Check to see if it is absent
AM_RLC error indication (for C-plane)	Check to see if it is set to FALSE
AM_RLC error indication (for U-plane)	Check to see if it is set to FALSE
Cell update cause	Check to see if it is set to “Cell Reselection”
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM

Use the same message sub-type found in Clause 8.1 of TS34.108.

8.4.1.6.5 Test Requirement

After step 4 the UE shall transmit RRC CONNECTION SETUP COMPLETE message with the IE “Measurement capability”, indicating that both uplink and downlink inter-frequency measurements for FDD mode are supported.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 2’s CPICH Ec/No value.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages which contain inter-frequency measured results for cell 2’s CPICH Ec/No value.

After step 14 the UE shall transmit CELL UPDATE message to inform that a cell reselection to cell 2 has occurred.

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

When transiting from CELL_FACH state to CELL_DCH state, the UE shall resume intra-frequency measurement if it has previously stored such a measurement context in CELL_DCH state. If the measurement context indicates reporting in CELL_DCH state, the UE shall re-start the associated reporting activities. In the case when the UE is not assigned any measurement tasks, it shall monitor the list of neighbouring cells stated in system information messages. It shall transmit MEASUREMENT REPORT messages when the reporting criteria (if specified in system information messages) are met. When in CELL_DCH state, the UE shall override existing measurement and reporting contexts extracted from system information messages, if a MEASUREMENT CONTROL message is received. The UE shall then apply the new measurement and reporting parameters accordingly. If the UE has performed a cell reselection whilst out of CELL_DCH state, the UE shall not re-start intra-frequency measurement previously designated to be resumed in CELL_DCH state.

Reference

3GPP TS 25.331, clause 8.4.1.8

8.4.1.7.3 Test Purpose

To confirm that UE resumes intra-frequency measurement and reporting when it enters CELL_DCH state from CELL_FACH state, if such a condition exists before entering CELL_DCH state. To confirm that the UE continues to monitor the neighbour cells intra-frequency measurement list found in system information messages, if no previous assigned measurement is present. To confirm that the UE transmits MEASUREMENT REPORT messages if reporting conditions stated in system information messages have

been satisfied. To confirm that a subsequent MEASUREMENT CONTROL message received in CELL_DCH state

8.4.1.7.4 Method of test

Initial Condition

System Simulator: 3 cells –All 3 are all active. The transmission power (RSCP) for CPICH of the 3 cells are as follow: cell 1 (-40dBm), cell 2 (-55dBm) and cell 3 (-70dBm).

UE: CELL_FACH in cell 1.

Test Procedure

The UE is brought to CELL_FACH state, after the test operator has successfully initiated a packet-switched data call. The SYSTEM INFORMATION BLOCK TYPE 12 message is changed with respect to the default message contents, specifying that cell 2 is to be included in the neighbouring cell list for intra-frequency measurement. Event 1e is selected in IE"Intra-frequency measurement reporting criteria".

SS send a PHYSICAL CHANNEL RECONFIGURATION message to UE, allocating dedicated physical channels on both uplink and downlink direction. Upon receiving such a message, the UE shall return PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and move to CELL_DCH state. The UE shall send MEASUREMENT REPORT messages to indicate that the measured result of cell 2, as the measurement quantity has exceeded the threshold value in system information message. After receiving this message, SS transmits MEASUREMENT CONTROL message in which it specifies that intra-frequency measurement for cell 3 shall be performed. The reporting criteria are the same as in SYSTEM INFORMATION BLOCK TYPE 12 message, except that the reporting threshold is lowered. After receiving such a message, the UE shall transmit another MEASUREMENT REPORT message. SS verifies that only measurement reading for cell 3 is included and no IEs shall be present, which pertaining to measurement quantity in cell 2.

Next, SS sends PHYSICAL CHANNEL RECONFIGURATION message to UE. In this message, the physical channel resources are switched to common physical channels – PRACH (RACH) for the uplink and S-CCPCH (FACH) for the downlink. UE shall reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE and transits to CELL_FACH. SS checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received. SS then transmits another MEASUREMENT CONTROL message. The key parameters employed are: measurement type = 'intra-frequency measurement', measurement object = 'cell 2', reporting criteria = 'periodic reporting', measurement validity = 'resume', UE state for reporting = 'CELL_DCH'. SS waits for 10 seconds before sending a PHYSICAL CHANNEL RECONFIGURATION message, comprising DPDCH physical channels. UE shall then return to CELL_DCH state, start to monitor the neighbour cell specified by the SS while the UE was in CELL_FACH state. The UE shall resume periodic reporting of cell 2's CPICH RSCP measured results by sending MEASUREMENT REPORT messages. Following the reception of the MEASUREMENT REPORT message, SS commands the UE to stop performing measurements and generation of reports for cell 2. SS then verifies that no MEASUREMENT REPORT messages are detected.

In the next sequence, SS dispatches a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH. In this message, common physical channel resources are assigned to the UE. The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then transit to CELL_FACH state. Then SS sends a MEASUREMENT CONTROL message, with the content identical to the previous message of the type transmitted in step 10. This effectively signifies that the UE shall re-start the intra-frequency measurement and reporting activities related to cell 2, when it subsequently manages to return to CELL_DCH state. Following this, SS increases the P-CPICH RSCP of cell 3 to -45dBm and shortly after this, stops the transmission of all downlink physical channel of cell 1. SS then waits for T305 to expire. The UE shall discover a "out-of-service" condition and initiate a cell re-selection procedure. This can be verified by the SS receiving a CELL UPDATE message on the uplink CCCH, with the "cell update cause" IE set to "cell reselection". SS sends a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH, assigning DPCH channel in both uplink and downlink directions. The UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then return to CELL_FACH state. SS checks that the UE does not generate any MEASUREMENT REPORT messages on the uplink DCCH.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_FACH after having successfully connected a packet-switched data call. SYSTEM INFORMATION TYPE BLOCK TYPE 12 message is changed according to the descriptions in Specific Message Contents.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates DPDCH physical channels.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
4		←	MEASUREMENT REPORT	Reports cell 2's RSCP value.
5		→	MEASUREMENT CONTROL	Specifies cell 3 as the measurement object for intra-frequency measurement. The reporting criteria is the same as defined in SYSTEM INFORMATION BLOCK TYPE 12 message, with the exception that threshold for event 1e is lowered.
6		←	MEASUREMENT REPORT	UE shall report the estimated value for cell 3's CPICH RSCP reading only.
7		→	PHYSICAL CHANNEL RECONFIGURATION	Allocates PRACH and S-CCPCH physical channels.
8		←	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9				SS checks that no MEASUREMENT REPORT messages are sent by UE.
10		→	MEASUREMENT CONTROL	SS indicates that intra-frequency measurement and reporting for cell 2 be resumed if the UE subsequently transits to CELL_DCH state.
11		→	PHYSICAL CHANNEL RECONFIGURATION	SS waits for 10 seconds before sending this message. DPCH physical channels are assigned to the UE in this message.
12		←	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
13		←	MEASUREMENT REPORT	UE begins to report cell 2's measured results again.
14		←	MEASUREMENT CONTROL	<u>Terminate all the intra-frequency measurement activity related to cell 2. SS checks that no more MEASUREMENT REPORT messages are sent by the UE.</u>
15		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates PRACH and S-CCPCH physical channels.
16		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
17		←	MEASUREMENT CONTROL	Message is the same as in <u>step 10</u>
18				<u>SS increases the transmission power of cell 3 (P-CPICH RSCP is raised to -45dBm) and switches off all downlink transmissions for cell 1. SS then waits until T305 expires.</u>
19		→	CELL UPDATE	<u>UE shall re-selects to cell 2 and then perform a cell update procedure.</u>

<u>20</u>	<u>←</u>	<u>CELL UPDATE CONFIRM</u>	<u>UE shall stay in CELL_FACH state.</u>
<u>21</u>	<u>→</u>	<u>PHYSICAL CHANNEL RECONFIGURATION</u>	<u>DPCH physical channels are assigned to the UE in this message.</u>
<u>22</u>	<u>←</u>	<u>PHYSICAL CHANNEL RECONFIGURATION COMPLETE</u>	<u>UE shall return to CELL_DCH state.</u>
<u>23</u>			<u>SS checks that no MEASUREMENT REPORT messages are received on uplink DCCH.</u>

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12

Information Element	Value/Remark
Reference to other system information blocks	Not Present
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity number	10
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH Ec/No
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted-detected~~ cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- W	Not present
- Hysteresis	~~1-0 dB~~ Not Present
- Threshold used frequency	-60dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present
- ~~Reporting Threshold~~	-60dBm
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting Interval	16 seconds
- Inter-frequency measurement system information	Not Present
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	
- UE internal measurement system information	Not Present

[Editor's Note] IE "Threshold Used Frequency" (originated from CR 324) and IE "Reporting Threshold" (originated from CR 289r1) are basically similar in function, it is not clear whether one should be removed.

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_DCH from CELL_FACH in PS"

MEASUREMENT REPORT (Step 4)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 10
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- ~~CFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5)

Information Element	Value/Remark
Measurement Identity Number	11
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted~~ <u>detected</u> cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	~~1.0 dB~~ <u>Not Present</u>
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Reporting Threshold	-90dBm
- Time to Trigger	0
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 11
Measurement Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 3
- SFN-SFN observed time difference	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

PHYSICAL CHANNEL RECONFIGURATION (Step 7 and 15)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "Packet to CELL_FACH from CELL_DCH in PS"

MEASUREMENT CONTROL (Step 10 and 17)

Information Element	Value/Remark
Measurement Identity Number	12
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Removed intra-frequency info list	Not Present
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell identity	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for ~~unlisted~~ <u>detected</u> cells	Not present
- Reporting cell status	Not present
- Measurement validity	Resume
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 2
- W	Not Present
- Hysteresis	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Reporting Threshold	-65dBm
- Time to Trigger	0
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting cell status	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 11 and 21)

Same as in step 2

MEASUREMENT REPORT (Step 13)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 12
Measurement Results	Check to see if set to "Intra-frequency measured results list"
- CHOICE measurement	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 2
- SFN-SFN observed time difference	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- CFN-SFN observed time difference	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measured event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 14)

Information Element	Value/Remarks
Measurement Identity Number	12
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE Measurement type	Not Present
DPCH compressed mode status info	Not Present

CELL UPDATE (Step 21)

Information Element	Value/Remarks
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0000 0001'
Integrity check info	Not checked
AM_RLC error indicator (for C-plane)	Check to see if set to 'FALSE'
AM_RLC error indicator (for U-plane)	Check to see if set to 'FALSE'
Cell Update Cause	Check to see if set to 'Cell Re-selection'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE (Step 21)

Use the default message content of the same message type in Annex A.

8.4.1.7.5 Test Requirement

After step 3 the UE shall report cell 2's CPICH RSCP value by transmitting a MEASUREMENT REPORT message.

After step 5 the UE shall delete all measurement and reporting contexts obtained from system information messages. However, it shall transmit a MEASUREMENT REPORT message containing measured results of cell 3's CPICH RSCP value only.

After step 8 the UE shall stop intra-frequency measurement reporting assigned previously in the MEASUREMENT CONTROL message received in step 5.

After step 12 the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT message, containing measured results of cell 2's CPICH RSCP value.

After step 14 the UE shall stop all measurement activities pertaining to cell 2, no MEASUREMENT REPORT messages shall be detected by the SS in the uplink DCCH.

After step 19 the UE shall re-select to cell 3 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 3, with the “cell update cause” IE stated as “cell re-selection”.

After step 22 the UE shall not start to perform measurement for cell 2, no MEASUREMENT REPORT messages shall be detected by the SS in the uplink DCCH.

8.4.1.8 Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.8.1 Definition

8.4.1.8.2 Conformance requirement

When transiting from CELL_FACH state to CELL_DCH state, the UE shall stop monitoring the list of inter-frequency neighbour cells indicated in system information messages. If the UE has a previously stored inter-frequency measurement context marked as resume, it shall reinstate the suspended measurement and associated reporting activities after it has entered CELL_DCH state.

Reference

3GPP TS 25.331 clause 8.4.1.8

8.4.1.8.3 Test Purpose

To confirm that the UE erases all inter-frequency measurement contexts used in CELL_FACH state, when it moves to CELL_DCH. To confirm that the UE resumes inter-frequency measurements and reporting, which was assigned prior to CELL_FACH state, after it moves to CELL_DCH state.

8.4.1.8.4 Method of test

Initial Condition

SS: 3 cells – All 3 cells are active and the applicable radio conditions are stated in the table below:

	Cell 1	Cell 2	Cell 3
UARFCN (N_u and N_d)	Channel 1	Channel 2	Channel 2
CPICH RSCP	-60 dBm	-65 dBm	-75 dBm
$Q_{rxlevmin}$	-90 dBm	-90 dBm	-90 dBm
S	30	25	15

UE: CELL_FACH in cell 1 after an incoming packet-switched data call is successfully established.

Test Procedure

The UE is in CELL_FACH state after a successful connection, triggered by an incoming packet-switched data call. SS modifies the content of SYSTEM INFORMATION BLOCK TYPE 12 message, which indicates that cell 2 shall be included in the list of neighbouring cells to be monitored for inter-frequency measurements. Next, SS transmits MEASUREMENT CONTROL message to request the UE to execute an inter-frequency measurement for cell 3. The parameters of the reporting criteria are as follow: event-triggered with event identity = '2c', threshold for non-used frequency = '-80 dBm', hysteresis = '1.0dB', time to trigger = '10 seconds', amount of reporting = '1' and reporting interval = '0'. In the same message, IE "Measurement validity" is set to resume and "UE state for reporting" is assigned the value 'CELL_DCH'.

SS sends PHYSICAL CHANNEL RECONFIGURATION message to allocate dedicated physical channels to the UE. Simultaneously, SS uses this message to command UE to start applying compressed mode mechanism for DPCH. The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then move to CELL_DCH state. SS waits for 10 seconds. The UE shall transmit MEASUREMENT REPORT message, containing the selected frequency quality estimate (in the case CPICH

Ec/No) of cell 3. SS verifies that this message does not contain measured results for cell 2. After sending this message, the UE shall not transmit any more MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_FACH state after establishing an incoming packet-switched data call. SS modifies SYSTEM INFORMATION BLOCK TYPE 12 to include cell 2 into the neighbour cell list for inter-frequency measurements.
2		←	MEASUREMENT CONTROL	SS specifies inter-frequency measurement and reporting parameters for cell 3.
3		←	PHYSICAL CHANNEL RECONFIGURATION	SS allocates DPCH physical channels and specifies compressed mode parameters
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE moves to CELL_DCH state.
5		→	MEASUREMENT REPORT	UE shall resume inter-frequency measurement task for cell 3 and transmit this message to report the measured CPICH Ec/No value

Specific Message Content

SYSTEM INFORMATION BLOCK TYPE 12 (Step 1)

Information Element	Value/Remark
References to other system information blocks	Not Present
FACH measurement occasion info	
- k_UTRA	2
- Other RAT present in inter-system cell info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency measurement identity number	15
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info for SIB11/12	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -90dBm
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency measurement reporting criteria	~~Not Present~~
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0dB
- Time to trigger	10 sec
- Amount of reporting	1
- Reporting interval	0
- Parameters required for each non used frequency	
- Threshold non-used frequency	-80dBm
- W non-used frequency	0.0
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

MEASUREMENT CONTROL (Step 2)

Information Element	Value/Remark
Measurement Identity Number	14
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Removed inter-frequency info list	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 3
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 3
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- Read SFN Indicator	FALSE
- TX Diversity Indicator	FALSE
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	TRUE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/No	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting cell status	Not present
- Measurement validity	
- Resume/Release	Resume
- UE State	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	0
- Time to trigger	10 seconds
- Amount of reporting	1
- Reporting Interval	0
- Reporting cell status	Not Present
- Parameters required for each non-used frequency	
- Threshold non used frequency	-80 dBm
- W non-used frequency	0.0

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

Use the same message sub-type found in Clause 8.1 of TS34.108, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (Single)
- Downlink DPCH power control information	Refer to the parameter set in TS 34.108
- DPC mode	Flexible
- Spreading factor	FALSE
- Fixed or flexible position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits (SF=128, 256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	Active
- TGPSI	
- TGPS Status Flag	FDD Measurement
- Transmission gap pattern sequence configuration parameters	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	No code change
- Uplink compressed mode method	A
- Scrambling code change	2.0
- Downlink frame type	1.0
- DeltaSIR	
- DeltaSIRAfter	

MEASUREMENT REPORT (Step 5)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 14
Measurement Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 3
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 3
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if set to the id of cell 3
- SFN-SFN observed time difference	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
- ~~CFN-SFN observed time difference~~	~~Check to see if it is absent~~
Event Results	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 3
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 3
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.8.5 Test Requirement

After step 4 the UE shall transmit a MEASUREMENT REPORT message, containing the measured results for cell 3's CPICH Ec/No value. The UE shall not transmit any messages pertaining to cell 2's measurements.

8.4.1.9 Measurement Control and Report: Unsupported measurement in the UE

8.4.1.9.1 Definition

8.4.1.9.2 Conformance requirement

If the UTRAN indicates the UE to perform a measurement that is not supported in the UE, the UE shall keep the measurement configuration. Then the UE shall transmit a MEASUREMENT CONTROL FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS25.331 clause 8.4.1.

8.4.1.9.3 Test purpose

To confirm that the UE transmits a MEASUREMENT CONTROL FAILURE message, with the value "unsupported measurement" specified in IE" failure cause" when the SS commanded the UE to perform an unsupported measurement by sending a MEASUREMENT CONTROL message.

8.4.1.9.4

Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_DCH

[Editor's note : It is assumed in this test that the UE under test does not possess any inter-system measurement capability. The mandatory type(s) of measurement capability that should be implemented by the UE is to be discussed]

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a MEASUREMENT CONTROL message which includes parameters (e.g. Measurement identity number : 2 , measurement command : Setup , measurement type: inter-system measurements, measurement reporting mode: unacknowledged and periodical reporting, measurement object: inter-system cell information, measurement quantity: Signal strength, reporting quantity: RSSI on BCCH carrier). As the UE under test does not support inter-system measurement, it shall transmit a MEASUREMENT CONTROL FAILURE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state.
2		←	MEASUREMENT CONTROL	Including the parameters (e.g. Measurement identity number : 2 , measurement command : Setup , measurement type: inter-system measurements, measurement reporting mode: unacknowledged and periodical reporting, measurement object: inter-system cell information, measurement quantity: Signal strength, reporting quantity: RSSI on BCCH carrier).
3		→	MEASUREMENT CONTROL FAILURE	Which is set to "unsupported measurement" in IE" failure cause".

Specific Message Content

MEASUREMENT CONTROL

Information Element	Value/Remark
Measurement Identity Number	2
Measurement Command	Setup
Measurement Reporting Mode	Unacknowledged mode
Additional measurements list	Not Present
CHOICE measurement type	Inter-system measurement
- Inter-system cell info list	
- Removed inter-system cells	Not Present
- New inter-system cells	1
- Inter-system cell id	
- CHOICE <i>Radio Access Technology</i>	GSM
- Qoffset _{s,n}	Not Present
- HCS Neighbouring Cell Information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -90dBm
- Maximum allowed UL TX power	Set to the maximum allowed by UE RF power class
- BSIC	Set to the BSIC code of cell 2
- BSIC ARFCN	Set to the ARFCN assigned to cell 2
- Output power	Not Present
- Inter-system measurement quantity	
- CHOICE <i>reporting criteria</i>	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH Ec/No
- Inter-system reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference	FALSE
- CPICH Ec/No	FALSE
- CPICH RSCP	FALSE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting Cell Status	Not Present
- CHOICE Report Criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting Interval	32 seconds

MEASUREMENT CONTROL FAILURE

Information Element	Value/Remarks
Failure cause	To check if it is set to "Unsupported measurement"

8.4.1.9.4 Test requirement

After step 2 the UE shall identify the unsupported measurement element in the MEASUREMENT CONTROL message and transmit a MEASUREMENT CONTROL FAILURE. In this message, the value "unsupported measurement" shall be specified in IE "failure cause".

8.4.1.10 Measurement Control and Report: Failure (Invalid Message Reception)**8.4.1.10.1 Definition****8.4.1.10.2 Conformance requirement**

When the UE received a MEASUREMENT CONTROL message containing an unexpected conditional IE, it shall reply with a MEASUREMENT CONTROL FAILURE message stating the appropriate protocol error information. It shall maintain the monitoring and measurement reporting mechanism as in before the MEASUREMENT CONTROL message has been received.

Reference

3GPP TS 25.331 clause 8.4.1.9

8.4.1.10.3 Test Purpose

To confirm that the UE does not change its current monitoring and measurement settings after it has received an illegal MEASUREMENT CONTROL message, which contains an unexpected IE error. To confirm that the UE resume its normal measurement reporting operations after transmitting MEASUREMENT CONTROL FAILURE message to the SS.

8.4.1.10.4 Method of test

Initial Condition

System Simulator : 1 cell.

UE : CELL_DCH

Test Procedure

The UE is initially brought to CELL_DCH. SS transmits a MEASUREMENT CONTROL message to the UE, commanding it to start transmitting report messages for the reporting quantity "UE Transmitted Power". SS then waits for the MEASUREMENT RERORT message with the allocated measurement identity to arrive. Then it transmits the MEASUREMENT CONTROL message again. In this message, SS requests that the reporting activities for "UE Transmitted Power" be stopped. At the end of this message, SS appends an unknown information element. When the UE receives this message, it shall reply with MEASURMENT CONTROL FAILURE message as it has detected a protocol error. It shall not cease to report its own transmission power level using MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
2		←	MEASUREMENT CONTROL	SS transmits this message on downlink DCCH to instruct UE to start reporting the quantity "UE transmit power".
3		→	MEASUREMENT REPORT	UE shall send this message periodically at 32 seconds interval
4		←	MEASURMENT CONTROL	SS sends a MEASUREMENT CONTROL message to request that UE stop the reporting activity.
5		→	MEASUREMENT CONTROL FAILURE	UE shall maintain its current measurement context and send this message.
6		→	MEASUREMENT REPORT	32 seconds after step 3, UE shall continue to transmit this message to the SS.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE Transmitted Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds

MEASUREMENT REPORT (Step 3)

Information Element	Value/Remarks
Measurement identity number	Check to see if set to 3
Measurement Results	
CHOICE measurement	Check to see if set to "UE internal measurement"
- UE Transmitted Power	Check to see if the reported power is compatible with RF class
- UE Rx-Tx report entries	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 4)

Information Element	Value/Remark
Measurement Identity Number	3
Measurement Command	Stop
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Contains an arbitrary value

MEASUREMENT CONTROL FAILURE (Step 5)

Information Element	Value/Remark
Failure cause	Check to see if set to "protocol error"
Protocol error information	Check to see if set to "Message extension not comprehended"

MEASUREMENT REPORT (Step 6)

Same as in the requirement for step 3

8.4.1.10.5 Test Requirement

After step 4 the UE shall transmit MEASUREMENT FAILURE message, stating the IE "failure cause" as "protocol error" and IE "protocol error information" as "message extension not comprehended". It shall continue to send MEASUREMENT REPORT with the correct identity number and measurement result entries at approximately 32 seconds interval.

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for ~~unlisted~~ ~~detected~~ set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	~~Not Present~~ 64 sec
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- CFN-SFN observed time difference	<u>Not checked</u>
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- ~~CFN-SFN observed time difference~~	~~Not checked~~
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 019

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Revision of failure cases in active set update and radio bearer control procedures

Work item:

Category:

(only one category shall be marked with an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

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Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

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Reason for change:

In CR-379r1 for TS 25.331 V3.2.0, the mechanism for UE to ignore multiple ACTIVE SETUP UPDATE message sent on the UM mode was proposed. Previously, RRC STATUS messages have to be sent every time the UE detects a repeated transmission of ACTIVE SET UPDATE message. This CR provides the necessary corrections to TS 34.123-1 by inserting additional test steps into clause 8.3.4.6.

Beside active set update procedure, RRC STATUS messages specified in clause 8.2.X of TS 25.331 V3.2.0 are to be changed to the appropriate "FAILURE" messages. Hence clauses 8.2.X in TS 34.123-1 V3.0.0 need to be updated.

In CR-410r1 for TS 25.331 V3.2.0, the principle of an "unacceptable" configuration was introduced. This is defined as the case when the UE receives a DPCH compressed mode info, but detects that an overlapping between two or more transmission pattern gap exists. The titles of affected test cases in clause 8.2.X are updated to reflect this type of abnormal events.

Clauses affected: 8.2.X, 8.3.4.6.

Other specs affected:

Other 3G core specifications	☐	→ List of CRs:
Other GSM core specifications	☐	→ List of CRs:
MS test specifications	☐	→ List of CRs:
BSS test specifications	☐	→ List of CRs:
O&M specifications	☐	→ List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.2 Radio Bearer control procedure

8.2.1 Radio Bearer Establishment

8.2.1.1 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success(Data integrity protection algorithm is not applied)

8.2.1.1.1 Definition

8.2.1.1.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

(This is the case where data integrity protection algorithm is not applied.)

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.1.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state, after the test operator is prompted to make an out-going call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1 including the start of tx/rx. This message requests the establishment of RABs for carrying the traffic of the speech call. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message do not contain IE “integrity check info” and “integrity protection mode info”
2		→	RADIO BEARER SETUP COMPLETE	This message do not contain “integrity check info” and “Uplink integrity activation info”
3				To confirm the communication.

Specific Message Contents

For RADIO BEARER SETUP in step 1, using the message sub-type indicated as “Speech in CS” or “Packet to CELL_DCH from CELL_DCH in PS” found in default message content clause.

8.2.1.1.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation.

8.2.1.2 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success(Effectuated Data integrity protection algorithm)

8.2.1.2.1 Definition

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8.2.1.2.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message, which applies data integrity function, and then communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1, 8.5.11.

8.2.1.2.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message which contains IE “Integrity check info” and IE “Integrity protection mode info” received from the SS.

8.2.1.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH and data integrity algorithm is not applied

Test Procedure

The UE is in the CELL_DCH state, after the test operator is prompted to make an out-going data call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message which is including IE “integrity check info” and “integrity protection mode info” to the UE after it sets up L1 including the start of tx/rx. This message requests the establishment of RABs for carrying the traffic of the call. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message which is including IE “integrity check info” using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message contain IE "integrity check info" and "integrity protection mode info"
2		→	RADIO BEARER SETUP COMPLETE	This message contain "integrity check info"
3				To confirm the communication.

Specific Message Contents

For RADIO BEARER SETUP in step 1, using the message sub-types indicated as "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in default message content clause.

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to identical message sub-type found in TS 34.108 Clause 8, with the following exceptions:

Information Element	Value/remark
Integrity check info	
- Message authentication code	Bit string (32) MAC-I See TS33.102
- RRC Message sequence number	0
Integrity protection mode info	Present
- Integrity protection mode command	"Start"
- Downlink integrity protection activation info	Not present (It is needed only when the IE"Integrity protection mode command" has the value "modify" .)
- integrity protection algorithm	UMTS Integrity Algorithm UIA1
- integrity protection initialisation number	Bit string (32) FRESH See TS33.102

RADIO BEARER SETUP COMPLETE

Information Element	Value/remark
Integrity check info	
- Message authentication code	Not checked(MAC-I See TS33.102)
- RRC Message sequence number	Not checked
Uplink Integrity protection activation info	Not checked

8.2.1.2.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation. This can be verified by the correct reproduction of the u-plane data transmitted and received between the test operator and SS.

8.2.1.3 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.1.3.1 Definition

8.2.1.3.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message which includes unsupported configuration parameters and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.3.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of receiving a RADIO BEARER SETUP message which includes parameters of its unsupported configuration.

8.2.1.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message as the frequency cannot be supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	16383.
- UARFCN downlink(Nd)	Not Present.

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.1.3.5 Test requirement

After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

8.2.1.4 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.4.1 Definition

8.2.2.1.4.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to configure the new radio bearer by the T312 expiry and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.4.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message when the UE fails to configure the new radio bearer following detection of physical channel failure after T312 expiry.

8.2.1.4.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message to the UE and does not configure the new radio bearer. Then after T312 expiry, the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	The SS does not configure the new radio bearer stated in the message.
2				The UE does not configure the new radio bearer and reverts to the old configuration.
3		→	RADIO BEARER SETUP FAILURE	UE shall transmit this message using the old RRC signalling bearer operating in RLC-AM mode.

Specific Message Contents

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.1.4.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

8.2.1.5 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and reversion failure)

8.2.1.5.1 Definition

8.2.1.5.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer establishment procedure.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.5.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot establish the new radio bearer for the L1 configuration and cannot revert to the old configuration.

8.2.1.5.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell No.1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2, with a power level suitable for camping but lower than that of cell 1. Next, SS transmits a RADIO BEARER SETUP message to the UE. As the SS does not configure the new radio bearer and deletes the old configuration the UE fails to configure L1 and fails to revert to the old configuration. Then the UE shall find cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE "U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS transmits a BCCH in cell 2 but with a lower power level than in cell 1.
2		←	RADIO BEARER SETUP	The SS does not configure the new radio bearer and delete the old configuration.
3				The UE shall detect a failure to configure the new radio bearers and also subsequently, cannot revert to old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall detect the presence of cell.2and transmits this message which includes the IE"U-RNTI" it has been assigned to.
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.1.5.5 Test requirement

After step3 the UE shall find a new cell 2, enter CELL_FACH state, and transmit RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step6 the UE shall re-establish an RRC connection in cell 2.

8.2.1.6 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.6.1 Definition

8.2.1.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message and the UE shall transmit an RRC STATUS message on the DCCH using AM RLC which is set to "Message not compatible with receiver state" "incompatible simultaneous reconfiguration" in IE "Protocol error cause" "failure cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.6.3 Test purpose

To confirm that the UE keeps its configuration and transmits an RRC STATUS message when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message.

8.2.1.6.4

Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER SETUP message to the UE before the UE configures the radio bearer the UE keeps the old configuration and transmits an ~~an RRC STATUS~~ RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration in IE” ~~“Protocol error cause”~~ “failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including IE“Uplink DPCH info”
2		←	RADIO BEARER SETUP	SS send this message before the expiry of activation time specified in RADIO BEARER SETUP message of step 1.
3		→	~~RRC STATUS~~ <u>RADIO BEARER SETUP FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

For RADIO BEARER SETUP in step 1 and step 2, use the message sub-type indicated as “Speech in CS” or “Packet to CELL_DCH from CELL_DCH in PS” found in default message content clause, with the exception of the following Information Elements:

RADIO BEARER SETUP (Step 1)

Information Element	Value/remark
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256

RADIO BEARER SETUP (Step 2)

Information Element	Value/remark
Activation Time	Not Present

~~RRC STATUS~~ RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.1.6.5

Test requirement

After step2 the UE shall keep its configuration and transmit an ~~an RRC STATUS~~ RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration in IE” ~~“Protocol error cause”~~ “failure cause”.

8.2.1.7 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception)

8.2.1.7.1 Definition

8.2.1.7.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" and criticality is defined as "Reject". Then it transmits a RADIO BEARER SETUP FAILURE message which is set to "protocol error" in IE" failure cause" and is set to "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.7.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message which indicates the spare value in the mandatory IE" DRX indicator" whose criticality is defined as "Reject".

8.2.1.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message to the UE which indicates a spare value in the mandatory IE" DRX indicator" whose criticality is defined as "Reject". The UE keeps the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE" failure cause", and is set to "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to that of default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.7.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “protocol error” in IE” failure cause” and set to “Information element value not comprehended” in IE” Protocol error cause”.

8.2.1.8 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Success

8.2.1.8.1 Definition

8.2.1.8.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.8.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state, after the test operator is asked to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	SS requests test operator to make an outgoing packet-switched data call.
2		→	RADIO BEARER SETUP COMPLETE	
3				To confirm the communication between UE and SS, based on the exchange of packets.

Specific Message Contents

For RADIO BEARER SETUP message in step 1, use the message sub-type indicated as “Packet to CELL_DCH from CELL_FACH in PS” found in default message content clause.

8.2.1.8.5 Test requirement

After step2 the UE shall communicate with the SS on the radio bearer for its implementation.

8.2.1.9 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.1.9.1 Definition

8.2.1.9.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which indicates an unsupported configuration parameters and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.9.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of receiving a RADIO BEARER SETUP message which includes parameters of unsupported configuration.

8.2.1.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER SETUP message specifying a frequency that cannot be supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to that of default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	16384.
- UARFCN downlink(Nd)	Not present

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.1.9.5 Test requirement

After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting value “configuration unacceptable” in IE” failure cause”.

8.2.1.10 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Physical channel Failure)

8.2.1.10.1 Definition

8.2.1.10.2 Conformance requirement

The UE shall initiate the cell update procedure when the UE failed to access the assigned physical channel according to a RADIO BEARER SETUP message when transiting from CELL_DCH state to CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.10.3 Test purpose

To confirm that the UE perform a cell update procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER SETUP message as it transits from CELL_DCH to CELL_FACH.

8.2.1.10.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and transmits a RADIO BEARER SETUP message as the transition occurs from CELL_DCH to CELL_FACH. The UE cannot access the assigned physical channel, as the SS does not transmit any data on the downlink common channel in cell 1. Then the UE shall initiate the cell update procedure in cell 2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Assigned the transition from CELL_DCH to CELL_FACH
2			BCCH	The SS broadcasts BCCH in cell No.2.
3				The UE cannot use the assigned the physical channel.
4		→	CELL UPDATE	The UE finds a new cell 2 and begins a cell update procedure.
5		←	CELL UPDATE CONFIRM	In the CELL_FACH state

Specific Message Contents

None

8.2.1.10.5 Test requirement

After step3 the UE shall find a new cell No.2 and enter to CELL_FACH state. Then the UE shall initiate a cell update procedure in cell No.2.

8.2.1.11 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.11.1 Definition

8.2.1.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message. The UE shall transmit an ~~an~~ **RRC STATUS** **a RADIO BEARER SETUP FAILURE** message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ **“incompatible simultaneous reconfiguration in IE”** ~~Protocol error cause”~~ **“failure cause”**.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.11.3 Test purpose

To confirm that the UE keeps its configuration and transmits an ~~an~~ **RRC STATUS** **a RADIO BEARER SETUP FAILURE** message when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message.

8.2.1.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS sends a RADIO BEARER SETUP message to request the UE to perform radio bearer establishment procedure. Before the UE can complete the configuration of the radio bearer, the SS transmits another RADIO BEARER SETUP message. The UE shall keep the old configuration and transmit an RRC STATUS RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “~~Message not compatible with receiver state~~” “incompatible simultaneous reconfiguration in IE” “~~Protocol error cause~~” “failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Message includes IE “PRACH info (for RACH)”
2		←	RADIO BEARER SETUP	Message includes the IE “Uplink DPCH info”
3		→	~~RRC STATUS~~ RADIO BEARER SETUP FAILURE	The UE does not change the configuration. UE shall not have access to the DTCH channel indicated in the RADIO BEARER SETUP messages of step 1 and step 2.

Specific Message Contents

RADIO BEARER SETUP (Step 1)

For this message, use the message sub-type entitled “Packet to CELL_FACH from CELL_DCH in PS” in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RADIO BEARER SETUP (Step 2)

For this message, use the message sub-type entitled “Packet to CELL_DCH from CELL_DCH in PS” in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Not Present.

~~RRC STATUS~~ RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.1.11.5 Test requirement

After step2 the UE shall keep its configuration and not access any of the DTCH traffic channels specified in either of the RADIO BEARER SETUP message. It shall transmit an ~~RRC STATUS~~ RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “~~Message not compatible with receiver state~~” “incompatible simultaneous reconfiguration in IE” “~~Protocol error cause~~” “failure cause”.

8.2.1.12 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.1.12.1 Definition

8.2.1.12.2 Conformance requirement

The UE shall keep its old configuration when it receives a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". It shall then transmit a RADIO BEARER SETUP FAILURE message which is set to "protocol error" in IE" failure cause" and also contains value "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.12.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if the received a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject".

8.2.1.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state, after the test operator makes an outgoing packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". The UE shall keep the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The value "protocol error" shall be set in IE" failure cause" and also value "Information element value not comprehended" set in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	SS sends this message which contains an error in the IE"DRX Indicator".
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_FACH from CELL_DCH in PS" in the default contents clause of layer 3 messages for RRC tests. The following exceptions should be applied:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.12.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “protocol error” in IE” failure cause” and is set to “Information element value not comprehended” in IE” Protocol error cause”.

8.2.1.13 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success

8.2.1.13.1 Definition

8.2.1.13.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.13.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state, after SS prompts the test operator to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1 including the start of tx/rx. After the UE receives this message, it configures them and establishes the required radio bearers. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				To confirm the communication

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by “Packet to CELL_DCH from CELL_FACH in PS” in the default contents clause of layer 3 messages for RRC tests.

8.2.1.13.5 Test requirement

After step2 the UE shall communicate with the SS using the radio bearer indicated in RADIO BEARER SETUP message. Particularly, SS should be able to receive packet data using a terminal equipment (TE) attached to the UE.,.

8.2.1.14 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.1.14.1 Definition

8.2.1.14.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message which includes an unsupported configuration and then transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, which sets value “configuration unacceptable” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.14.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of it receiving a RADIO BEARER SETUP message, which includes parameters of an unsupported configuration.

8.2.1.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message with a stated frequency that cannot be supported by the UE. After the UE receives this message, it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting value “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	This message includes an unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE shall transmit this message using RLC-AM mode and do not change the current configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	0
- UARFCN downlink(Nd)	Not Present

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.1.14.5 Test requirement

After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

8.2.1.15 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.15.1 Definition

8.2.1.15.2 Conformance requirement

The UE shall attempt to revert to the old configuration when the UE fails to configure the new radio bearer by the T312 expiry. It shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC containing value “physical channel failure” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.15.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message when the UE fails to configure the new radio bearer when it detects physical channel failure, followed by the T312 expiry.

8.2.1.15.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message to the UE and does not configure the new radio bearer. After T312 expiry, the UE shall revert to the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The content of the message shall indicate “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	The SS does not configure a new radio bearer.
2				The UE does not configure a new radio bearer but reverts to the old configuration.
3		→	RADIO BEARER SETUP FAILURE	

Specific Message Contents

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.1.15.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

8.2.1.16 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and reversion failure)

8.2.1.16.1 Definition

8.2.1.16.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer establishment procedure.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.16.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot establish the new radio bearer for the L1 configuration and subsequently fail to revert to the old configuration.

8.2.1.16.4

Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 but with a transmission level lower than that for cell 1. It then transmits a RADIO BEARER SETUP message to the UE from cell 1. Then the SS deletes the old downlink channel configuration after sending this message. This causes the UE to fail to configure L1 and could not revert to the old configuration. The UE shall find the presence of cell 2 and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message. The message shall include the IE "U-RNTI" and sent on the uplink CCCH. The SS responds with an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS transmits the BCCH in cell 2, but with a power level lower than that in cell 1.
2		←	RADIO BEARER SETUP	The SS does not configure the new radio bearer and instead delete the old configuration.
3				The UE cannot configure a new radio bearer and cannot revert to old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find the presence of cell 2. It shall then transmit this message including its assigned U-RNTI in the IE "U-RNTI".
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

RADIO BEARER SETUP The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type "Packet to CELL_DCH from CELL_FACH in PS" found in the default contents of layer 3 messages for RRC tests.

RRC CONNECTION RE-ESTABLISHMENT REQUEST

Information Element	Value/remark
U-RNTI	Set to assigned UE U-RNTI in RRC CONNECTION SETUP message.
Protocol error indication	FALSE

RRC CONNECTION RE-ESTABLISHMENT COMPLETE

Information Element	Value/remark
Radio bearer uplink ciphering activation time info	Not Present
RB with PDCP information list - RB with PDCP information list	Not Present

8.2.1.16.5 Test requirement

After step3 the UE shall find the presence of cell 2, which is suitable for camping. It shall then enter CELL_FACH state and transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST message to prevent the RRC connection from being lost.

After step6 the UE shall re-establish an RRC connection, using the new TFCS settings specified in RRC CONNECTION RE-ESTABLISHMENT message

8.2.1.17 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.17.1 Definition

8.2.1.17.2 Conformance requirement

The UE shall keep its old configuration, when it receives another RADIO BEARER SETUP message before it can complete the configuration of the radio bearer according to the first RADIO BEARER SETUP message. The UE shall transmit ~~an RRC STATUS~~ a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with value “~~Message not compatible with receiver state~~” “incompatible simultaneous reconfiguration” set in IE “~~Protocol error cause~~” “failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.17.3 Test purpose

To confirm that the UE keeps its configuration and transmits ~~an RRC STATUS~~ a RADIO BEARER SETUP FAILURE message when the UE receives another RADIO BEARER SETUP message, before the UE configures the radio bearer according to an earlier RADIO BEARER SETUP message.

8.2.1.17.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message, requesting the UE to setup radio bearers using DPCH physical channels. The activation time of this event is specified to be 255 frames from the SS's current CFN. However, SS sends another RADIO BEARER SETUP message before 255 frames has passed. The UE shall then abandon its current reconfiguration operation, keep the old configuration, and transmit ~~an RRC STATUS~~ a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. This message shall contain the value “~~Message not compatible with receiver state~~” “incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~” “failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including IE"Uplink DPCH info"
2		←	RADIO BEARER SETUP	
3		→	~~RRC STATUS~~ RADIO BEARER SETUP FAILURE	The UE does not change the configuration and transmit this message on its uplink DCCH using the same RLC-AM mode radio bearer before step 1.

Specific Message Contents

RADIO BEARER SETUP (for Step 2)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

~~RRC STATUS~~RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.1.17.5 Test requirement

After step2 the UE shall keep its configuration and transmit an ~~RRC STATUS~~RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "~~Message not compatible with receiver state~~""incompatible simultaneous reconfiguration" in IE"~~Protocol error cause~~""failure cause".

8.2.1.18 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.1.18.1 Definition

8.2.1.18.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which includes the spare value in the mandatory IE" DRX indicator" having criticality defined as "Reject". It shall transmit a RADIO BEARER SETUP FAILURE message which set value "protocol error" in IE" failure cause" and also value "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.18.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message, with a spare value in the mandatory IE" DRX indicator" and having criticality defined as "Reject".

8.2.118.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER SETUP message to the UE which includes a spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". The UE keeps the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. This message shall specify "protocol error" in IE" failure cause" and also set the value "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.18.5 Test requirement

After step1 the UE shall keep its old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The message shall indicate the reason of failure as "protocol error" in IE" failure cause" and set the value "Information element value not comprehended" in IE" Protocol error cause".

8.2.1.19 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Success

8.2.1.19.1 Definition

8.2.1.19.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and communicate with the UTRAN for its implementation.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.19.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message received from the SS.

8.2.1.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state, after the test operator is being prompted to make an outgoing packet-switched call. The SS transmits a RADIO BEARER SETUP message to the UE after it sets up L1 including the start of tx/rx. After the UE receives this message, it configures them and establishes a radio bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				To confirm the proper establishment of the new radio bearer by checking the packet data exchanged between the SS and a TE attached to the UE.

Specific Message Contents

RADIO BEARER SETUP

or this message, use the message sub-type entitled “Packet to CELL_FACH from CELL_FACH in PS” in the default message content.

8.2.1.19.5 Test requirement

After step2 the UE shall communicate with the SS using the new radio bearer , this can be confirmed by the exchange of packet data between a terminal equipment (TE) attached to the UE and the SS,

8.2.1.20 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.1.20.1 Definition

8.2.1.20.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message which includes an unsupported configuration and it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting the value “configuration unacceptable” into IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.20.3 Test purpose

To confirm that the UE keeps its original configuration and transmits a RADIO BEARER SETUP FAILURE message when it receives a RADIO BEARER SETUP message indicating an unsupported configuration.

8.2.1.20.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message specifying a frequency which is not supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63947
- UARFCN downlink(Nd)	Not present

RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.1.20.5 Test requirement

After step1 the UE shall keep its configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC and set value “configuration unacceptable” in IE” failure cause”.

8.2.1.21 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.21.1 Definition

8.2.1.21.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message and the UE shall transmit ~~an RRC STATUS~~ RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.21.3 Test purpose

To confirm that the UE keeps its configuration and transmits ~~an RRC STATUS~~ RADIO BEARER SETUP FAILURE message when the UE receives another RADIO BEARER SETUP message before the UE configures the radio bearer according to a RADIO BEARER SETUP message.

8.2.1.21.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER SETUP message to the UE before the UE configures the radio bearer the UE keeps the old configuration and transmits ~~an RRC STATUS~~ RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	Including IE“Uplink DPCH info”
2		←	RADIO BEARER SETUP	
3		→	~~RRC STATUS~~ <u>RADIO BEARER SETUP FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

~~RRC STATUS~~ RADIO BEARER SETUP FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.1.21.5 Test requirement

After step2 the UE shall keep its configuration and transmit ~~an RRC STATUS~~ RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

8.2.1.22 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.1.22.1 Definition

8.2.1.22.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message, which includes a spare value for the mandatory IE "DRX indicator" having criticality defined as "Reject". It shall then transmit a RADIO BEARER SETUP FAILURE message stating the reason "protocol error" in IE "failure cause" and also set value "Information element value not comprehended" in IE "Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.22.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message specifying a spare value in the mandatory IE "DRX indicator"

8.2.1.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER SETUP message to the UE and includes the spare value in the mandatory IE "DRX indicator". The UE shall keep the old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "protocol error" in IE "failure cause". The error type "Information element value not comprehended" shall also be indicated in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type "Packet to CELL_FACH from CELL_FACH in PS ", which is found in the default contents clause of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER SETUP FAILURE

The expected content of RADIO BEARER SETUP FAILURE message is shown below:

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.1.22.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting “protocol error” in IE” failure cause” and setting “Information element value not comprehended” in IE” Protocol error cause”.

8.2.2 Radio Bearer Reconfiguration

8.2.2.1 Radio Bearer Reconfiguration(Hard handover) from CELL_DCH to CELL_DCH:Success

8.2.2.1.1 Definition

8.2.2.1.2 Conformance requirementThe UE shall correctly reconfigure a radio bearer or L1 according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.1.3 Test purpose

To confirm that the UE reconfigurer a new radio bearer by following a RADIO BEARER RECONFIGURATION message received from the SS.

8.2.2.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new transport channel parameter reconfiguret. The UE reconfigures the new transport cannel and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				Reconfiguration of r Physical channel
3		→	RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Selected value as the UE can support which is different from current frequency. Selected value as the UE can support which is different from current frequency.

8.2.2.1.5 Test requirement

After step1 the UE shall reconfigure the radio links with the SS.

After step3 the UE shall change its physical channel configuration and communicate with the SS on the DCCH and DTCH using the modified physical channel configurations

8.2.2.2 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.2.2.1 Definition

8.2.2.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.2.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message includes unsupported configuration parameters.

8.2.2.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984.
- UARFCN downlink(Nd)	Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“RADIO BEARER RECONFIGURATION FAILURE”
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.2.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the value “configuration unacceptable” set in IE” failure cause”.

8.2.2.3 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.2.3.1 Definition

8.2.2.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by received RADIO BEARER RECONFIGURATION message and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to the RADIO BEARER RECONFIGURATION message received previously.

8.2.2.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new radio bearer parameters but it does not reconfigure L1 according to the settings found in the message. The UE shall revert to the old configuration. Then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting value “.physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				SS does not reconfigure L1 parameters to reflect the radio bearer reconfigurations specified in the message.
3		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall detect a failure to reconfigure the new radio bearer, and send this message using the old radio bearer configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“RADIO BEARER RECONFIGURATION FAILURE”
Failure cause	Physical channel failure
Other information element	Not checked

8.2.2.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC setting value “.physical channel failure” in IE” failure cause”.

8.2.2.4 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH : Failure (Physical channel failure and reversion failure)

8.2.2.4.1 Definition

8.2.2.4.2 Conformance requirement

.The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot reconfigure the new radio bearer, and a subsequent failure to revert to the old configuration.

8.2.2.4.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in a cell 1. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters. The SS does not reconfigure L1 in accordance to the settings in the message and delete all radio bearer related contexts in cell 1. At the same time, SS begins to broadcast the BCCH in a cell 2. The UE discovers that it cannot reconfigure the new radio bearer and wants to revert to the old configuration. The UE shall find cell 2 and transmit to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which specifies a new TFCS according to the new transport channel allocated. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the new radio bearer and delete the old configuration in cell 1.
3				The UE fails to reconfigure a new radio bearer.
4		←	BCCH	The SS transmits a BCCH in a cell 2 and delete the old radio bearer.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds cell.2 and transmits this message which includes the IE "U-RNTI" it was previously assigned.
6		←	RRC CONNECTION RE-ESTABLISHMENT	This message includes a new TFCS according to the new transport channel indicated in RRC CONNECTION RE-ESTABLISHMENT message.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.2.4.5 Test requirement

After step4 the UE shall detect the presence of cell.2, enters CELL_FACH state, and transmit RRC CONNECTION RE-ESTABLISHMENT to attempt to keep the current RRC connection.

After step7 the UE shall successfully re-establish an RRC connection.

8.2.2.5 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.5.1 Definition

8.2.2.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can configure the radio bearer according to an earlier RADIO BEARER RECONFIGURATION message. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC setting ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.5.3 Test purpose

To confirm that the UE keeps its configuration and transmits an ~~RRC STATUS~~ RADIO BEARER RECONFIGURATION FAILURE message when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can complete the configuration of the radio bearer indicated in an earlier RADIO BEARER RECONFIGURATION message.

8.2.2.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the requested radio bearer(s), the UE keeps the old configuration and transmits an ~~RRC STATUS~~ RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC. This messageshall set value ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE“Uplink DPCH info”
2		←	RADIO BEARER RECONFIGURATION	Sent before the “activation time” in step 1 has elapsed
3		→	~~RRC STATUS~~ <u>RADIO BEARER RECONFIGURATION FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RRC STATUS RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	<u>"RRC STATUS RADIO BEARER RECONFIGURATION FAILURE"</u>
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.2.5.5 Test requirement

After step2 the UE shall keep its configuration and transmit an RRC STATUS RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which contains the value ~~"Message not compatible with receiver state"~~ "incompatible simultaneous reconfiguration" set in IE ~~"Protocol error cause"~~ "failure cause".

8.2.2.6 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception)

8.2.2.6.1 Definition

8.2.2.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message, which includes the spare value in the mandatory IE "DRX indicator" having criticality defined as "Reject". The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message which is set to "protocol error" in IE "failure cause" and is set to "Information element value not comprehended" in IE "Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.6.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, if it receives a RADIO BEARER RECONFIGURATION message containing a spare value in the mandatory IE "DRX indicator" with criticality defined as "Reject".

8.2.2.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the spare value in the mandatory IE "DRX indicator" which criticality is defined as "Reject". The UE keeps the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE "failure cause" and is set to "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message contains a illegal error in a mandatory IE.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests, with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC stating the reason "protocol error" in IE" failure cause". The message shall contain the value "Information element value not comprehended" in IE" Protocol error cause".

8.2.2.7 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH :Failure (Suspension of signalling bearer)

8.2.2.7.1 Definition

8.2.2.7.2 Conformance requirement

The UE shall revert to the old configuration prior to the reception of RADIO BEARER RECONFIGURATION message, which includes IE"RBSuspend/resume" specified as "Suspend", and transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.7.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which specifies the suspension of a signalling radio bearer to be reconfigured. The UE shall revert to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the IE "failure cause" set to "configuration unacceptable".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Specifies a signalling radio bearer to be suspended.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list RB information to reconfigure l -RB identity -RB suspend/resume	3 "Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.7.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC specifying the reason "configuration unacceptable " in IE "failure cause".

8.2.2.8 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Success

8.2.2.8.1 Definition

8.2.2.8.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer in case of a transition from CELL_DCH to CELL_FACH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.8.3 Test purpose

To confirm that the UE establishes the reconfigured radio bearer(s) using common physical channel, after a RADIO BEARER RECONFIGURATION message has been received from the SS.

8.2.2.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters and sets up L1 including the start of tx/rx. The UE reconfigures the new radio bearer and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				Reconfiguration of radio bearer
3		→	RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

None

RADIO BEARER RECONFIGURATION

8.2.2.8.5 Test requirement

After step1 the UE shall reconfigure the radio links with the SS.

After step3 the UE shall change its radio bearer configuration and communicate with the SS on the DCCH and DTCH, using the common physical channel allocated in RADIO BEARER RECONFIGURATION message.

8.2.2.9 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.2.9.1 Definition

8.2.2.9.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.9.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message indicates an unsupported configuration parameters.

8.2.2.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984.
- UARFCN downlink(Nd)	Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“RADIO BEARER RECONFIGURATION FAILURE”
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.9.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason “configuration unacceptable” in IE” failure cause”.

8.2.2.10 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Physical channel failure)

8.2.2.10.1 Definition

8.2.2.10.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER CHANNEL RECONFIGURATION message, during the transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.10.3 Test purpose

To confirm that the UE initiate a cell reselection after encountering a physical channel failure, when attempting to transit from CELL_DCH to CELL_FACH state during the execution of radio bearer reconfiguration procedure. The UE is first instructed to select the cell implied in the RADIO BEARER RECONFIGURATION message, but discover a failure as the indicated cell is not present.

8.2.2.10.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active and cell 2 is inactive

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. SS starts to transmit the BCCH for cell 2, but with a power level lower that of cell 1. Following this, the SS send a RADIO BEARER RECONFIGURATION message to the UE, which includes relevant information about the target cell's P-CPICH. SS selects an unused primary scrambling code for P-CPICH, which neither matches the code used by cell 1 nor cell 2. This should lead to the detection of a physical channel failure in the UE. The UE shall trigger a cell reselection and initiate a cell update procedure if it is able to access cell 2. When SS receives a CELL UPDATE message in cell 2 on uplink CCCH, it replies with CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS begin to broadcast the BCCH data in cell 2, but with a power level lower than in cell 1.
2		←	RADIO BEARER RECONFIGURATION	The message includes IE "Primary CPICH Info" and set the IE "Primary Scrambling Code" to an unknown value (not used by cell 1 or cell 2).
3				UE shall detect a "physical channel failure" condition and then trigger a cell reselection procedure.
4		→	CELL UPDATE	After successfully camping onto cell 2, UE shall initiate a cell update procedure. The updating cause shall be set to "cell reselection"
5		←	CELL UPDATE CONFIRM	Contains cell

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Downlink information for each radio link - Primary CPICH Info - Primary Scrambling Code	Set to an unused code different from the 3 cells defined.

CELL UPDATE

Information Element	Value/remark
U-RNTI	The assigned U-RNTI indicated In RRC CONNECTION SETUP message
Cell Update Cause	Cell Reselection

8.2.2.10.5 Test requirement

After step3, the UE shall discover the presence of cell 2, enter CELL_FACH and then perform a cell updating procedure by the transmission of CELL UPDATE using RLC-TM mode on CCCH. The UE shall transit to CELL_PCH state to monitor the PCCH channel after the reception of CELL UPDATE CONFIRM message.

8.2.2.11 Radio Bearer Reconfigure from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.11.1 Definition

8.2.2.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before it completes the re-configuring the radio bearer according to an earlier RADIO BEARER RECONFIGURATION message. The UE shall transmit an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.11.3 Test purpose

To confirm that the UE keeps its current radio bearer configurations and transmits an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message when the UE receives another RADIO BEARER RECONFIGURATION message before it is able to complete an earlier reconfiguration request.

8.2.2.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the radio bearer the UE keeps the old configuration and transmits an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE"Uplink DPCH info"
2		←	RADIO BEARER RECONFIGURATION	
3		→	<u>RRC STATUS</u> <u>RADIO BEARER RECONFIGURATION FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

The contents of RADIO BEARER RECONFIGURATION messages in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

RADIO BEARER RECONFIGURATION (Step 1)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RADIO BEARER RECONFIGURATION (Step 2)

Information Element	Value/remark
Activation Time	Not Present

RRC STATUSRADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	<u>"RRC STATUS</u> <u>RADIO BEARER RECONFIGURATION FAILURE"</u>
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.2.11.5 Test requirement

After step2 the UE shall keep its exiting radio bearer configuration and transmit an RRC STATUSRADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RL, with the value ~~"Message not compatible with receiver state"~~"incompatible simultaneous reconfiguration" in IE ~~"Protocol error cause"~~"failure cause".

8.2.2.12 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.2.12.1 Definition

8.2.2.12.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes the spare value in the mandatory IE" DRX indicator", possessing a criticality level defined as "Reject". It shall transmit a RADIO BEARER RECONFIGURATION FAILURE message which is set to "protocol error" in IE" failure cause" and is also set to "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.12.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC to respond to an earlier RADIO BEARER RECONFIGURATION message, which applies a spare value in the mandatory IE" DRX indicator" having criticality defined as "Reject".

8.2.2.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes a spare value in the mandatory IE "DRX indicator". The UE keeps the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE "failure cause" and setting "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.12.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with "protocol error" specified in IE "failure cause" and also "Information element value not comprehended" specified in IE "Protocol error cause".

8.2.2.13 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Failure (Suspension of signalling bearer)

8.2.2.13.1 Definition

8.2.2.13.2 Conformance requirement

The UE shall revert to the configuration prior to the reception of the RADIO BEARER RECONFIGURATION message which indicates suspension for an existing signalling radio bearer in IE "RB suspend/resume". It shall transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.13.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE receives RADIO BEARER RECONFIGURATION message asking for the suspension of an existing signalling radio bearer.

8.2.2.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the IE"RB suspend/resume" set to "Suspend" for one signalling radio bearer. The UE shall revert to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message requests for the suspension of a current available signalling radio bearer
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list RB information to reconfigure l -RB Identity -RB suspend/resume	3 "Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type Failure cause Other information element	"RADIO BEARER RECONFIGURATION FAILURE" configuration unacceptable Not checked

8.2.2.13.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC specifying "configuration unacceptable " in IE" failure cause".

8.2.2.14 Radio Bearer Reconfiguration: from CELL_FACH to CELL_DCH: Success

8.2.2.14.1 Definition

8.2.2.14.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer in case of a transition from CELL_FACH to CELL_DCH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.14.3 Test purpose

To confirm that the UE establishes a new radio bearer by following a RADIO BEARER RECONFIGURATION message received from the SS.

8.2.2.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new radio bearer parameters and sets up L1 including the start of tx/rx. The UE reconfigures the new radio bearer and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	This message includes IE"Uplink DPCH Info"
2				Reconfiguration of radio bearer
3		→	RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION

None

8.2.2.14.5 Test requirement

After step2 the UE shall change its radio bearer configuration and communicate with the SS on the DCCH and DTCH which are being carried by the DPCH physical channel resources.

8.2.2.15 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.2.15.1 Definition

8.2.2.15.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.15.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the RADIO BEARER RECONFIGURATION message received includes unsupported configuration parameters.

8.2.2.15.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes unsupported configuration parameters of the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC and set “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message includes an unsupported configuration for the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.15.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC stating “configuration unacceptable” in IE” failure cause”.

8.2.2.16 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.2.16.1 Definition

8.2.2.16.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by received RADIO BEARER RECONFIGURATION message and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.16.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.16.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters and does not reconfigure L1. Therefore, the UE cannot reconfigure the new radio bearer and shall attempt to revert to the old configuration. Then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigures L1 including the start of tx/rx
3		→	RADIO BEARER RECONFIGURATION FAILURE	The UE fails to reconfigure a new radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.2.16.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting “physical channel failure” in IE” failure cause”.

8.2.2.17 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.2.17.1 Definition

8.2.2.17.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.17.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure, when the UE cannot reconfigure the new radio bearer following a failure to configure L1 parameters for the new radio bearer settings and also a reversion failure to the old configuration.

8.2.2.17.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the new radio bearer parameters but does not reconfigure L1 to cater to the new radio bearer settings. The UE cannot reconfigure the new radio bearer and wants to revert to the old configuration. But the SS does not configure the old radio bearer and begins to broadcast the BCCH in a cell 2 and stops broadcasting the BCCH in cell 1. Then the UE finds a new cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE"U-RNTI" on the uplink CCCH. The SS replies with an RRC CONNECTION RE-ESTABLISHMENT message, specifying a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the new radio bearer and delete the old configuration.
3				The UE shall detect a failure to reconfigure a new radio bearer, and start to revert to old configuration.
4		←	BCCH	The SS starts to transmit the BCCH in cell 2 and delete the old radio bearer settings in cell 1.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell.2 and transmits this message which includes the IE"U-RNTI" it possesses.
6		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.2.17.5 Test requirement

After step4 the UE shall detect the presence of cell 2, enter CELL_FACH state, and attempt to perform RRC connection re-establishment procedure.

After step7 the UE shall successfully re-establish an RRC connection, and be able to access the dedicated physical resources in cell 2.

8.2.2.18 Radio Bearer Reconfigure from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.18.1 Definition

8.2.2.18.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before it completes the reconfiguration of the new radio bearers specified in RADIO BEARER RECONFIGURATION message. Following this, the UE shall transmit an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with value “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” set in IE “~~Protocol error cause~~”“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.18.3 Test purpose

To confirm that the UE keeps its configuration and transmits an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message when the UE receives another RADIO BEARER RECONFIGURATION message before the UE configures the radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.18.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the completion of a radio bearer reconfiguration commanded earlier, the UE keeps the old configuration. The UE shall also transmit an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~”“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE"Uplink DPCH info"
2		←	RADIO BEARER RECONFIGURATION	Sent before the elapse of the "Activation Time" indicated in the previous RADIO BEARER RECONFIGURATION message.
3		→	~~RRC STATUS~~ RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	~~"RRC STATUS~~ "RADIO BEARER RECONFIGURATION FAILURE"
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.2.18.5 Test requirement

After step2 the UE shall keep its configuration and transmit an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to ~~"Message not compatible with receiver state"~~"incompatible simultaneous reconfiguration" in IE ~~"Protocol error cause"~~"failure cause".

8.2.2.19 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.2.19.1 Definition

8.2.2.19.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message, which includes the spare value in the mandatory IE" DRX indicator" with criticality defined as "Reject". Then it shall transmit a RADIO BEARER RECONFIGURATION FAILURE message setting "protocol error" in IE" failure cause" and also setting "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.19.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RECONFIGURATION message which includes the spare value in the mandatory IE" DRX indicator", with criticality defined as "Reject".

8.2.2.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating "protocol error" in IE" failure cause" and also set "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.19.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, which contain the cause "protocol error" in IE" failure cause" and "Information element value not comprehended" in IE" Protocol error cause".

8.2.2.20 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Suspension of signalling bearer)

8.2.2.20.1 Definition

8.2.2.20.2 Conformance requirement

The UE shall revert to the configuration prior to the reception of the RADIO BEARER RECONFIRGURATION message which specifies the suspension of an existing signalling radio bearer. It shall then transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.20.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer due to an inappropriate suspension request in RADIO BEARER RECONFIGURATION message.

8.2.2.20.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes the IE"RB suspend/resume" set to "Suspend" for one existing signalling radio bearer. The UE shall revert to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message includes IE"RB suspend/resume" for one of the signalling radio bearer.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list	
RB information to reconfigure l	
-RB identity	2
-RB suspend/resume	Set to the"Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	configuration unacceptable
Other information element	Not checked

8.2.2.20.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall contain the value "configuration unacceptable " in IE" failure cause".

8.2.2.21 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH:Success

8.2.2.21.1 Definition

8.2.2.21.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a RADIO BEARER RECONFIGURATION message which is communicate with the UTRAN on the new radio bearer and a transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.22.3 Test purpose

To confirm that the UE establishes a new radio bearer by following a RADIO BEARER RECONFIGURATION message received from the SS.

8.2.2.21.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the new transport channel parameter reconfigure for transit . The UE reconfigures the new transport cannel and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to broadcast the BCCH in cell 2.
2		←	RADIO BEARER RECONFIGURATION	including Primary CPICH Info
3				Reconfiguration of Transport channel
4		→	RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

None

8.2.2.21.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_FACH in the another cell and communicate with the SS on the DCCH and DTCH using the modified transport channel configurations

8.2.2.22 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.2.22.1 Definition

8.2.2.22.2 Conformance requirement

This procedure is used to handle the case of a failure to reconfigure radio bearer(s) or signalling link(s), following a detection of an unsupported configuration by the UE.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.22.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message includes unsupported configuration parameters.

8.2.2.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984.
- UARFCN downlink(Nd)	Not Present

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“RADIO BEARER RECONFIGURATION FAILURE”
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.22.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the value “configuration unacceptable” set in IE” failure cause”.

8.2.2.23 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Physical channel failure)

8.2.2.23.1 Definition

8.2.2.23.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.23.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to the RADIO BEARER RECONFIGURATION message received previously.

8.2.2.23.4 Method of test

Initial Condition

System Simulator : 3 cells Cell 1 is active, Cell 2 is inactive, Cell 3 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a RADIO BEARER RECONFIGURATION message, resulting in the UE to attempt to transit from CELL_FACH in cell 1 to CELL_FACH in cell 3. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 3. After the UE successfully camp onto cell 2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARE RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_FACH in cell 1 to CELL_FACH in cell 3
2			BCCH	The SS starts to broadcast the BCCH in cell 2.
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_PCH state.

Specific Message Contents

None

8.2.23.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.2.24 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.24.1 Definition

8.2.2.24.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can configure the radio bearer according to an earlier RADIO BEARER RECONFIGURATION message. The UE shall transmit an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC setting ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.24.3 Test purpose

To confirm that the UE keeps its configuration and transmits an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message when the UE receives another RADIO BEARER RECONFIGURATION message before the UE can complete the configuration of the radio bearer indicated in an earlier RADIO BEARER RECONFIGURATION message.

8.2.2.24.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the requested radio bearer(s), the UE keeps the old configuration and transmits an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC. This messageshall set value ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE“Uplink DPCH info”
2		←	RADIO BEARER RECONFIGURATION	Sent before the “activation time” in step 1 has elapsed
3		→	~~RRC STATUS~~ <u>RADIO BEARER RECONFIGURATION FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RC STATUS

Information Element	Value/remark
Message Type	~~“RRC STATUS~~ RADIO BEARER RECONFIGURATION FAILURE
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.2.24.5 Test requirement

After step2 the UE shall keep its configuration and transmit an ~~RRC STATUS~~RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which contains the value ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” set in IE ~~“Protocol error cause”~~“failure cause”.

8.2.2.25 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.2.25.1 Definition

8.2.2.25.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message, which includes the spare value in the mandatory IE “DRX indicator” having criticality defined as “Reject”. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message which is set to “protocol error” in IE “failure cause” and is set to “Information element value not comprehended” in IE “Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.25.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, if it receives a RADIO BEARER RECONFIGURATION message containing a spare value in the mandatory IE “DRX indicator” with criticality defined as “Reject”.

8.2.2.25.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which includes the spare value in the mandatory IE “DRX indicator” which criticality is defined as “Reject”. The UE keeps the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “protocol error” in IE “failure cause” and is set to “Information element value not comprehended” in IE “Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The message contains a illegal error in a mandatory IE.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests, with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.2.25.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC stating the reason "protocol error" in IE" failure cause". The message shall contain the value "Information element value not comprehended" in IE" Protocol error cause".

8.2.2.26 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH :Failure (Suspension of signalling bearer)

8.2.2.26.1 Definition

8.2.2.26.2 Conformance requirement

The UE shall revert to the old configuration prior to the reception of RADIO BEARER RECONFIGURATION message, which includes IE"RBSuspend/resume" specified as "Suspend", and transmit a RADIO BEARER RECONFIGURATION FAILURE message to UTRAN

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.26.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer according to a RADIO BEARER RECONFIGURATION message.

8.2.2.26.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE which specifies the suspension of a signalling radio bearer to be reconfigured. The UE shall revert to the old configuration. Then the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the IE" failure cause" set to "configuration unacceptable".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Specifies a signalling radio bearer to be suspended.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall revert to the old configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list RB information to reconfigure I -RB identity -RB suspend/resume	3 "Suspend"

RADIO BEARER RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.2.26.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC specifying the reason "configuration unacceptable " in IE" failure cause".

8.2.3 Radio Bearer Release

8.2.3.1 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success

8.2.3.1.1 Definition

8.2.3.1.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.1.3 Test purpose

To confirm that the UE release the existing radio bearer according to a RADIO BEARER RELEASE message received from the SS.

8.2.3.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE release the radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				Release the radio bearer
3		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

None

8.2.3.1.5 Test requirement

After step1 the UE shall release its radio bearers.

After step3 the UE shall stop communicating on the released radio bearers, no uplink transmission shall be observed originating from the released link. The remaining radio bearers shall continue to be operational.

8.2.3.2 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.3.2.1 Definition

8.2.3.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message which includes unsupported configuration parameters and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting value "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.2.3 Test purpose

To confirm that the UE keeps its current configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, if the received RADIO BEARER RELEASE message indicates an unsupported configuration parameters for the UE.

8.2.3.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELAESE message to the UE specifying a frequency which is not supported by the UE. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC indicating “configuration unacceptable” in IE” failure cause”..

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	Including unsupported configuration by the UE
2		→	RADIO BEARER RELAESE FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.3.2.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLCwith the IE” failure cause” set to “configuration unacceptable”. The UE shall able to continue receiving and sending user data.

8.2.3.3 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.3.3.1 Definition

8.2.3.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to configure the new radio bearer by timer T312 expiry and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearer according to a RADIO BEARER RELEASE message by timer T312 expiry.

8.2.3.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message but it does not configure L1 correspondingly. This causes the UE to fail to release the radio bearer, and after T312 expiry the UE reverts to the old configuration. The UE then transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which specifies “.physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The SS does not configure L1 to reflect the release of the indicated bearer.
3		→	RADIO BEARER RELEASE FAILURE	After T312 expiry, the UE finds that it fails to release a radio bearer and reverts to the old configuration.

Specific Message Contents

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.3.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which includes the value “.physical channel failure” in IE” failure cause”.

8.2.3.4 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure(Physical channel failure and reversion failure)

8.2.3.4.1 Definition

8.2.3.4.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer release procedure.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot revert to the old configuration after encountering a physical channel failure during the execution of a radio bearer release procedure.

8.2.3.4.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell.2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 with a lower power level than for cell 1. At the same time, it transmits a RADIO BEARER RELEASE message to the UE but does not configure L1. As a result, the UE fails to release the radio bearer properly and tries to revert to the old configuration after T312 expiry. But the SS deletes the old radio bearer so the UE shall find the availability of cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE "U-RNTI" and sent on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit the BCCH for cell 2 but at a lower power level than cell 1.
2		←	RADIO BEARER RELEASE	
3				The SS does not configure L1 and deletes the old configuration. This is expected to cause the UE to fail in the release the radio bearer and can not revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell 2 and then transmit this message which includes the IE "U-RNTI" set to its assigned connected mode identity.
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None.

8.2.3.4.5 Test requirement

After step 3 the UE shall find the presence of cell 2, enter CELL_FACH state, and transmits RRC CONNECTION RE-ESTABLISHMENT REQUEST message on the uplink CCCH of cell 2.

After step 6 the UE shall successfully re-establish an RRC connection, after sending RRC CONNECTION RE-ESTABLISHMENT COMPLETE message.

8.2.3.5 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.5.1 Definition

8.2.3.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message before the UE is able to release the indicated radio bearer according to a RADIO BEARER RELEASE message. The UE shall transmit an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.5.3 Test purpose

To confirm that the UE keeps its configuration when the UE receives another RADIO BEARER RELEASE message before the UE releases the radio bearer according to the earlier RADIO BEARER RELEASE message.

8.2.3.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the UE releases the radio bearer requested, the UE keeps the old configuration. It shall transmit an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Message sent before the “activation time” indicated in the message of step 1 has elapsed.
3		→	~~RRC STATUS~~ <u>RADIO BEARER RELEASE FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those found in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

RRC STATUS RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.3.5.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an **RRC STATUS RADIO BEARER RELEASE FAILURE** message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

8.2.3.6 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception)**8.2.3.6.1 Definition****8.2.3.6.2 Conformance requirement**

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message which includes the spare value in the mandatory IE “DRX indicator”. It shall transmit a RADIO BEARER RELEASE FAILURE message which contains value “protocol error” in IE “failure cause” and value “Information element value not comprehended” in IE “Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.6.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message, which uses a spare value in the mandatory IE “DRX indicator”.

8.2.3.6.4 Method of test**Initial Condition**

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE which includes the spare value in the mandatory IE “DRX indicator”. The UE keeps the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. This message shall indicate “protocol error” in IE “failure cause” and also “Information element value not comprehended” in IE “Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to that found in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	Spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, which is set to “protocol error” in IE” failure cause” and is set to “Information element value not comprehended” in IE” Protocol error cause”.

8.2.3.7 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Success

8.2.3.7.1 Definition

8.2.3.7.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message, when the common physical channel are requested to be used for the remaining radio bearers.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.7.3 Test purpose

To confirm that the UE release the existing the radio bearer according to a RADIO BEARER RELEASE message received from the SS.

8.2.3.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE release the radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				SS releases the radio bearer in the fashion specified in the message and allocate common channel resources to carry the remaining radio bearers.
3		→	RADIO BEARER RELEASE COMPLETE	UE shall be able to continue communication over the remaining radio bearers using the allocated common control channels.

Specific Message Contents

None

8.2.3.7.5 Test requirement

After step3 the UE shall release the specified radio bearer(s) and cease any further uplink transmission from these radio bearer(s). At the same time, it shall resume the transmission or reception of data for the previously suspended radio bearers.

8.2.3.8 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.3.8.1 Definition

8.2.3.8.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message, which includes an unsupported configuration parameters and then transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting “configuration unacceptable” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.8.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RELEASE message includes unsupported configuration parameters for the UE.

8.2.3.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELAESE message to the UE as the frequency cannot be supported by the UE. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and set value “configuration unacceptable” in IE” failure cause”..

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	The message Includes a configuration unsupported by the UE.
2		→	RADIO BEARER RELAESE FAILURE	The UE does not alter the current radio bearer configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not present

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.3.8.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

8.2.3.9 Radio Bearer Release for transition from CELL_DCH to CELL_FACH:
Failure (Physical channel failure)

8.2.3.9.1 Definition

8.2.3.9.2 Conformance requirement

The UE shall initiate the cell update procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER RELEASE message as the transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.9.3 Test purpose

To confirm that the UE perform a cell update procedure when the UE cannot use the assigned physical channel according to a RADIO BEARER RELEASE message as the transition from CELL_DCH to CELL_FACH.

8.2.3.9.4 Method of test

Initial Condition

System Simulator : 2 cells □ No.1 is active, No.2 is inactive □

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state in cell No.1. The SS begins to broadcast the BCCH in cell No.2 and transmits a RADIO BEARER RELEASE message as the transition from CELL_DCH to CELL_FACH. The UE cannot use the assigned physical channel as the SS does not transmit any data on the DL common channel in cell No.1. Then the UE initiate the cell update procedure in cell No.2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	Assigned the transition from CELL_DCH to CELL_FACH
2			BCCH	The SS broadcasts BCCH in cell No.2.
3				The UE cannot use the assigned the physical channel.
4		→	CELL UPDATE	The UE finds a new cell •No.2• and begins a cell update procedure.
5		←	CELL UPDATE CONFIRM	In the CELL_FACH state

Specific Message Contents

None

8.2.3.9.5 Test requirement

After step3 the UE shall find a new cell No.2 and enter to CELL_FACH state. Then the UE shall initiate a cell update procedure in cell No.2.

8.2.3.10 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.10.1 Definition

8.2.3.10.1 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message, before the UE manages to release the radio bearer specified in the RADIO BEARER RELEASE message. The UE shall transmit an ~~RRC STATUS~~ RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and set value ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.10.2 Test purpose

To confirm that the UE keeps its configuration when the UE receives another RADIO BEARER RELEASE message before the UE has completed the release of the radio bearer according to a RADIO BEARER RELEASE message.

8.2.3.10.3 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the it completes the releases of the requested radio bearer, the UE keeps the old configuration. Thereafter, it transmits an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and set ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Sent before the passing of the “activation time” indicated in RADIO BEARER RELEASE message in step 1.
3		→	~~RRC STATUS~~ <u>RADIO BEARER RELEASE FAILURE</u>	The UE shall not change the radio bearer configuration.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

~~RRC STATUS~~RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.3.10.4 Test requirement

After step2 the UE shall keep its old configuration and transmit an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

8.2.3.11 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.3.11.1 Definition

8.2.3.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message. The message uses a spare value for the mandatory IE “DRX indicator”. Upon receiving this message, the UE shall transmit a RADIO BEARER RELEASE FAILURE message containing the value “protocol error” in IE “failure cause” and also the value “Information element value not comprehended” in IE “Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.11.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message which uses a spare value in the mandatory IE" DRX indicator".

8.2.3.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE which indicates a spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration and then transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. The content of this message shall indicate "protocol error" in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	This message uses a spare value for a mandatory IE.
2		→	RADIO BEARER RELEASE FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	Spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.11.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which set "protocol error" in IE" failure cause" and also set "Information element value not comprehended" in IE" Protocol error cause".

8.2.3.12 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Success

8.2.3.12.1 Definition

8.2.3.12.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.12.3 Test purpose

To confirm that the UE release the existing radio bearer(s) according to the RADIO BEARER RELEASE message received from the SS.

8.2.3.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE shall release the radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				Release the radio bearer
3		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

None

8.2.3.12.5 Test requirement

After step3 the UE shall stop communicating on the released radio bearers, and resume all suspended radio bearer using the dedicated physical channel allocated.

8.2.3.13 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.3.13.1 Definition

8.2.3.13.2 Conformance requirement

The UE shall keep its old configuration when it receives a RADIO BEARER RELEASE message which specifies unsupported configuration parameters for the UE. Then the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which, setting value "configuration unacceptable" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.13.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RELEASE message requests for unsupported configuration parameters for the UE.

8.2.3.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE, referring to a frequency which cannot be supported by the UE. The UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and set "configuration unacceptable" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	The message contains a configuration not supported by the UE
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change the radio bearer configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.3.13.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, stating the reason "configuration unacceptable" in IE "failure cause".

8.2.3.14 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.3.14.1 Definition

8.2.3.14.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to configure the new radio bearer before T312 timer expiry. Then it shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value “physical channel failure” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.14.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearer in accordance the specified settings in RADIO BEARER RELEASE message by T312 timer expiry.

8.2.3.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message and does not configure L1. The UE is expected to encounter a failure while releasing the radio bearer. After T312 timer expiry, the UE shall revert to the old radio bearer configuration, so the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The SS does not configure L1.
3		→	RADIO BEARER RELEASE FAILURE	After T312 expiry the UE fails to release a radio bearer and reverts to the old configuration.

Specific Message Contents

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.3.14.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value “physical channel failure” in IE” failure cause”.

8.2.3.15 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure(Physical channel failure and reversion failure)

8.2.3.15.1 Definition

8.2.3.15.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer release procedure.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.15.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot revert to the old configuration, following a physical channel failure during the radio bearer release.

8.2.3.15.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell.1 is active, Cell 2 is inactive

UE : CELL_FACH in cell No.1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a RADIO BEARER RELEASE message to the UE, but it does not configure L1. This is expected to cause the UE to experience a failure to release the radio bearer and it subsequently tries to revert to the old configuration after T312 expiry. The SS deletes the old radio bearer, so the UE shall find cell 2 and transmits to it an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes the IE"U-RNTI" on the uplink CCCH. After receiving this message, the SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit the BCCH in a cell 2.
2		←	RADIO BEARER RELEASE	
3				The SS does not configure L1 and deletes the old configuration so the UE cannot release the radio bearer and also fails revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds a new cell 2 and then transmits this message which includes the IE"U-RNTI" it has been assigned to.
5		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None.

8.2.3.15.5 Test requirement

After step3 the UE shall find the presence of cell 2, enter CELL_FACH state, and transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST on the uplink CCCH.

After step6 the UE shall successfully re-establish an RRC connection and access the dedicated physical channels assigned.

8.2.3.16 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.16.1 Definition

8.2.3.16.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message before the UE is able to release the radio bearer according to an earlier RADIO BEARER RELEASE message. The UE shall then transmit an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting value ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.16.3 Test purpose

To confirm that the UE keeps its old configuration when it receives another RADIO BEARER RELEASE message before it releases the radio bearer according to an earlier RADIO BEARER RELEASE message.

8.2.3.16.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the UE completes the release of the radio bearer, it shall keep the old configuration and transmit an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. This message shall specify the reason ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Sent before the expiry stated in IE “Activation Time” of RADIO BEARER RELEASE message in step 1.
3		→	~~RRC STATUS~~ <u>RADIO BEARER RELEASE FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]
<u>RRC STATUS</u>RADIO BEARER RELEASE FAILURE	
Information Element	Value/remark
Message Type	
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.3.16.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an **RRC STATUSRADIO BEARER RELEASE FAILURE** message on the DCCH using AM RLC, and set the value “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE” ~~Protocol error cause~~”“failure cause”.

8.2.3.17 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.3.17.1 Definition

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8.2.3.17.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message which uses a spare value in the mandatory IE” DRX indicator”. It shall transmit a RADIO BEARER RELEASE FAILURE message which indicate the value “protocol error” in IE” failure cause” and setting “Information element value not comprehended” in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.17.3 Test purpose

To confirm that the UE transmits RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message which uses a spare value in the mandatory IE” DRX indicator”.

8.2.3.17.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELAESE message to the UE containing a spare value in the mandatory IE” DRX indicator”. The UE keeps the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, which shall indicate the reason “protocol error” in IE” failure cause” and also “Information element value not comprehended” in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change its current configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those for the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.17.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting “protocol error” in IE” failure cause” and also indicating “Information element value not comprehended” in IE” Protocol error cause”.

8.2.3.18 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Success

8.2.3.18.1 Definition

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8.2.3.18.2 Conformance requirement

The UE shall correctly release a radio bearer according to the RADIO BEARER RELEASE message received.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.18.3 Test purpose

To confirm that the UE release the existing the radio bearer(s) according to the RADIO BEARER RELEASE message received from the SS.

8.2.3.18.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE release the radio bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The UE shall release the requested radio bearer(s), and stop transmitting using these radio bearer(s).
3		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

None

8.2.3.18.5 Test requirement

After step1 the UE shall cease the transmission and reception of the affected radio bearers.

After step3 the UE shall stop communicating on radio bearers to be released.

8.2.3.19 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.3.19.1 Definition

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8.2.3.19.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message that specifies an unsupported configuration. It shall then transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and setting the cause "configuration unacceptable" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.19.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, if the received RADIO BEARER RELEASE message includes unsupported configuration parameters.

8.2.3.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE specifying a frequency, which cannot be supported by the UE. The UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, indicating "configuration unacceptable" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	Including an unsupported configuration for the UE
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change the radio bearer.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.3.19.5 Test requirement

After step2 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, and set “configuration unacceptable” in IE” failure cause”.

8.2.3.20 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.20.1 Definition

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8.2.3.20.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another RADIO BEARER RELEASE message, before the UE releases the radio bearer according to an earlier RADIO BEARER RELEASE message. The UE shall transmit an ~~RRC STATUS~~ RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, indicating “~~Message not compatible with receiver state~~” “incompatible simultaneous reconfiguration” in IE” ~~Protocol error cause~~” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.20.3 Test purpose

To confirm that the UE keeps its configuration when it receives another RADIO BEARER RELEASE message before it manage to release the radio bearer according to a RADIO BEARER RELEASE message.

8.2.3.20.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before it completes the release of the radio bearer, the UE shall keep the old configuration. It then transmits an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE” ~~Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2		←	RADIO BEARER RELEASE	Sent before the passing of the time indicated in “Activation Time Info” in the RADIO BEARER RELEASE message of step 1.
3		→	~~RRC STATUS~~ <u>RADIO BEARER RELEASE FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

~~RRC STATUS~~RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.3.20.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an ~~RRC STATUS~~RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, and setting “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE” ~~Protocol error cause”~~“failure cause”.

8.2.3.21 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.3.21.1 Definition

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8.2.3.21.2 Conformance requirement

The UE shall keep its old configuration when it receives a RADIO BEARER RELEASE message, including a spare value in the mandatory IE” DRX indicator”. It shall transmit a RADIO BEARER RELEASE FAILURE message with the cause “protocol error” in IE” failure cause” and also the cause “Information element value not comprehended” set in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.3

8.2.3.21.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, if it receives a RADIO BEARER RELEASE message using a spare value in the mandatory IE” DRX indicator”.

8.2.3.21.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE which includes the use of a spare value in the mandatory IE "DRX indicator". The UE shall keep the old configuration intact and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. The message shall state "protocol error" in IE "failure cause", and also indicate "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	This message contains a mandatory IE error.
2		→	RADIO BEARER RELEASE FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

RADIO BEARER RELEASE FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.3.21.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. This uplink message shall state the reason "protocol error" in IE "failure cause" and also indicate "Information element value not comprehended" in IE "Protocol error cause".

8.2.4 Transport channel reconfiguration

8.2.4.1 Transport channel reconfiguration from CELL_DCH to CELL_DCH(Hard handover to intra frequency): Success with no transport channel type switching

8.2.4.1.1 Definition

8.2.4.1.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to a TRANSPORT CHANNEL RECONFIGURATION message which is communicate with the UTRAN on the new transport channel.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.1.3 Test purpose

To confirm that the UE reconfigures a new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new transport channel parameters. The UE reconfigures the new transport channel and transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including UE information elements("TFS")
2				Reconfiguration of a new transport channel
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements	
-Uplink transport Channels	
-Added or Reconfigured TrCH information list	Number of Transport blocks = 2
-Downlink transport Channels	
-Added or Reconfigured TrCH information list	Selected value as the UE can support. Number of Transport blocks = 2

8.2.4.1.5 Test requirement

After step1 the UE shall reconfigure the radio links affected by the changes for uplink and downlink DCH. .

After step3 the UE shall continue to communicate with the SS on the DCCH using the new Transport Format Set (TFS) applicable on the existing transport channel.

8.2.4.2 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.4.2.1 Definition

8.2.4.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.2.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received TRANSPORT CHANNEL RECONFIGURATION message specifies unsupported configuration parameters.

8.2.4.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters of the UE. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the event “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including unsupported configuration by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the settings used by the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements	
-Uplink transport Channels	
-Added or Reconfigured TrCH information list	Number of Transport blocks = 4096
-Downlink transport Channels	
-Added or Reconfigured TrCH information list	Selected value as the UE can not support. Number of Transport blocks = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.4.2.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "configuration unacceptable" in IE" failure cause".

8.2.4.3 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.4.3.1 Definition

8.2.4.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by received TRANSPORT CHANNEL RECONFIGURATION message and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new transport channel parameters but it does not reconfigure the new transport channel. Therefore, the UE cannot reconfigure them and have to revert to the old configuration. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Specifies a change in the TFS of the dedicated transport channel used.
2				The SS does not reconfigure the transport channel, leading to the UE unable to reconfigure the new transport channel.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE reverts to the old configuration and transmits this message.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	Physical channel failure
Other information element	Not checked

8.2.4.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, and it shall set the value "physical channel failure" in IE" failure cause".

8.2.4.4 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.4.4.1 Definition

8.2.4.4.2 Conformance requirement

This procedure is used to failure of reconfiguration for a transport channel because of physical channel failure and reversion failure for the transition from CELL_FACH to CELL_FACH in the same cell..

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot reconfigure the new transport channel due to a failure of L1 configuration, and subsequently fail to revert to the old configuration after T312 expiry.

8.2.4.4.4 Method of test

Initial Condition

System Simulator : 2 cells – Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. SS begins to broadcast the BCCH of cell 2 using a power level lower than that applied for cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE. The

message specifies a new set of transport channel parameters but the SS does not reconfigure L1 correspondingly. At the same time, SS deletes its current contexts for cell 1. As a result, the UE cannot reconfigure the new transport channel and shall attempt to revert to the old configuration. The UE shall find the presence of cell 2 and then transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel assigned. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	SS begins to transmit the BCCH for cell 2.
2		←	TRANSPORT CHANNEL RECONFIGURATION	Specifies the use of a new setting for transport channel.
3				The SS does not reconfigure L1 and deletes the old configuration present in cell 1..
4				The UE fails to reconfigure a new transport channel.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE detects the presence of cell.2, and then transmits this message which includes the IE "U-RNTI".
6		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.4.4.5 Test requirement

After step4 the UE shall discover cell 2, enter CELL_FACH state, and then transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step7 the UE shall successfully re-establish an RRC connection in cell 2.

8.2.4.5 Transport Channel Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.5.1 Definition

8.2.4.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message, before the UE completes the configuration of the transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received earlier. The UE shall transmit an ~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to ~~"Message not compatible with receiver state"~~ "incompatible simultaneous reconfiguration" in IE ~~"Protocol error cause"~~ "failure cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.5.3 Test purpose

To confirm that the UE keeps its current configuration, transmits an ~~RRC STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message when it receives another TRANSPORT CHANNEL RECONFIGURATION message before the completion of an earlier reconfiguration request.

8.2.4.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before the UE has successfully configured the transport channel specified in an earlier message, the UE keeps the old configuration. After that, the UE shall transmit an ~~RRC STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~”“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Including IE“Uplink DPCH info”
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the time specified in IE“Activation Time Info” of message in step 1 has elapsed.
3		→	~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE	
Information Element	Value/remark
Message Type	“ ~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE”
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.4.5.5 Test requirement

After step2 the UE shall keep its configuration and transmit an ~~RRC STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~”“failure cause”.

8.2.4.6 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception)

8.2.4.6.1 Definition

8.2.4.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which makes use of a spare value in the mandatory IE" DRX indicator". Then it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message with the value "protocol error" set in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.6.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received TRANSPORT CHANNEL RECONFIGURATION message comprises a spare value in the mandatory IE" DRX indicator".

8.2.4.6.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes a spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying "protocol error" in IE" failure cause" and also indicating "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains an illegal value for a mandatory IE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The message shall specify "protocol error" in IE" failure cause" and set value "Information element value not comprehended" in IE" Protocol error cause".

8.2.4.7 Transport channel reconfiguration from CELL_DCH to CELL_FACH:
Success

8.2.4.7.1 Definition

8.2.4.7.2 Conformance requirement

The UE shall correctly reconfigure the transport channels according to TRANSPORT CHANNEL RECONFIGURATION message, after it is requested to perform a transition from CELL_DCH to CELL_FACH in the same cell in conjunction with the transport channel reconfiguration.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.7.3 Test purpose

To confirm that the UE reconfigures a new Transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits TRANSPORT CHANNEL RECONFIGURATION message to the UE which omits IE" Uplink DPCH info" and IE" Downlink DPCH info" . This should cause the UE to perform a state transition from CELL_DCH to CELL_FACH in the same cell. The UE then reconfigures the new transport channel according to this message and reconfigure the new physical channel according to the system information messages. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	IE"Uplink DPCH Info" and IE"Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration of transport channel
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.4.7.5 Test requirement

After step3 the UE shall transit from CELL_DCH to CELL_FACH in the same cell, and then continue to communicate with SS on the new transport channel and common physical channels.

8.2.4.8 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.4.8.1 Definition

8.2.4.8.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.8.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received TRANSPORT CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.4.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unacceptable" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including an unsupported transport channel configuration for the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements	
-Uplink transport Channels	
>Added or Reconfigured TrCH information list	Number of transport blocks = 4096
-Downlink transport Channels	
>Added or Reconfigured TrCH information list	Number of transport blocks = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.4.8.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, which shall contains cause “configuration unacceptable” in IE” failure cause”.

8.2.4.9 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Physical channel failure and reversion to old configuration)

8.2.4.9.1 Definition

8.2.4.9.2 Conformance requirement

The UE shall revert the old configuration when it fails to reconfigure the new transport channel requested. When reversion is successful, it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message to UTRAN.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.9.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new transport channel according to the TRANSPORT CHANNEL RECONFIGURATION message received.

8.2.4.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE which includes the new transport channel parameters. However, it does not reconfigure the new transport channel to reflect change. As a result, the UE should encounter difficulties in the reconfigure process and after T312 expiry, it shall revert to its stored old configuration. When the UE manages to return to the old configuration, it transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC and set the reason "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	
2				The SS does not reconfigure the transport channel hence the UE could not access the new transport channel.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	After T312 expiry, the UE reverts to the old configuration and transmits this message using the original transport channel settings.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	TRANSPORT CHANNEL RECONFIGURATION FAILURE
Failure cause	Physical channel failure
Other information element	Not checked

8.2.4.9.5 Test requirement

After step2 the UE shall attempt revert to the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The failure message shall contain the reason "physical channel failure" in IE" failure cause".

8.2.4.10 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Physical channel failure and reversion failure)

8.2.4.10.1 Definition

8.2.4.10.2 Conformance requirement

The UE shall initiate a RRC connection re-establishment procedure, after it encounters a physical channel failure followed by an inability to revert to the old transport channel configuration.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.10.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE fails successively in the following actions: (a) configure the new transport channel according to TRANSPORT CHANNEL RECONFIGURATION message received and (b) revert to the old channel configuration after timer T312 expiry.

8.2.4.10.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. SS begins to transmit the BCCH for cell 2. The SS then transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which specifies the new transport channel parameters on common physical channel. But the SS does not reconfigure the L1 parameters and the new transport channel to reflect this change. Consequently, the UE discovers that it cannot reconfigure the new transport channel and try to revert to the old configuration. At this time, SS deletes all context related to the old configuration in cell 1. Then the UE should find cell 2 and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE"U-RNTI" on the uplink CCCH. After the reception of such a message, the SS transmits an RRC CONNECTION RE-ESTABLISHMENT message and includes a new TFCS for the new transport channel in cell 2. After receiving this message, the UE reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit the BCCH cell 2.
2		←	TRANSPORT CHANNEL RECONGURATION	
3				The SS does not reconfigure L1. At the same time, it deletes the old channel configuration.
4				The UE fails to reconfigure a new transport channel.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall discover the presence of cell 2 and transmits this message, which includes the IE"U-RNTI".
6		←	RRC CONNECTION RE-ESTABLISHMENT	A new TFCS is commanded according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.4.10.5 Test requirement

After step4 the UE shall find cell 2, enter CELL_FACH state and then initiate RRC connection re-establishment procedure in cell 2.

After step7 the UE shall successfully re-establish an RRC connection in cell 2.

8.2.4.11 Transport Channel Reconfiguration from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.11.1 Definition

8.2.4.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message before the UE configures the transport channel, according to an earlier TRANSPORT CHANNEL RECONFIGURATION message. The UE shall transmit an ~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which specifies ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.11.3 Test purpose

To confirm that the UE keeps its configuration and transmits an ~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE message when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message, before the UE had completed the configuration of the transport channel originating from an earlier TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to request for a reconfiguration of the transport channel, leading to a state transition to CELL_FACH. However, before the completion of this process, SS sends a second TRANSPORT CHANNEL RECONFIGURATION message. The UE shall keep the old configuration as if no reconfiguration has occurred and then transmit an ~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The status message shall indicate ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	IE “Activation Time Info” is included
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the activation time requested in step 1 has passed.
3		→	~~RRC STATUS~~ <u>TRANSPORT CHANNEL RECONFIGURATION FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	~~"RRC STATUS TRANSPORT CHANNEL RECONFIGURATION FAILURE"~~
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.4.11.5 Test requirement

After step2 the UE shall keep its configuration and then transmit an RRC STATUS message on the DCCH using AM RLC, containing the reason ~~"Message not compatible with receiver state"~~ "incompatible simultaneous reconfiguration" in IE ~~"Protocol error cause"~~ "failure cause".

8.2.4.12 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Failure (Invalid message reception)**8.2.4.12.1 Definition****8.2.4.12.2 Conformance requirement**

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which makes use of a spare value in the mandatory IE "DRX indicator". Then it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message, setting the value "protocol error" in IE "failure cause" and also setting "Information element value not comprehended" in IE "Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.12.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives a TRANSPORT CHANNEL RECONFIGURATION message which uses a spare value in the mandatory IE "DRX indicator".

8.2.4.12.4 Method of test**Initial Condition**

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, and includes a spare value in the mandatory IE "DRX indicator". The UE shall keep the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The message shall specify "protocol error" in IE "failure cause" and also "Information element value not comprehended" in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains a mandatory IE error.
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.12.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The UE shall set "protocol error" in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

8.2.4.13 Transport channel reconfiguration from CELL_FACH to CELL_DCH : Success

8.2.4.13.1 Definition

8.2.4.13.2 Conformance requirement

The UE shall correctly reconfigure the transport channels according to TRANSPORT CHANNEL RECONFIGURATION message, which trigger a state transition from CELL_FACH to CELL_DCH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.13.3 Test purpose

To confirm that the UE reconfigures a new transport channel using dedicated physical channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes IE“ Uplink DPCH info” and IE” Downlink DPCH info” leading to a state transition from CELL_FACH to CELL_DCH in the same cell. The UE shall reconfigure the new transport channel according to this message and then reconfigure the new physical channel according to the system information message. Finally, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Includes both IE“Uplink DPCH Info” and IE”Downlink DPCH Info” in the message.
2				Reconfiguration of transport channel
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.4.13.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_DCH in the same cell, and continue to communicate with SS using the new transport channel configuration based on DPCH physical channels.

8.2.4.14 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.4.14.1 Definition

8.2.4.14.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.14.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC when it receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters.

8.2.4.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	The message includes unsupported configuration by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements	
-Uplink transport Channels	
-Added or Reconfigured TrCH information list	Number of transport channels = 4096
-Downlink transport Channels	
-Added or Reconfigured TrCH information list	Number of transport channels = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“TRANSPORT CHANNEL RECONFIGURATION FAILURE”
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.4.14.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The UE shall set “configuration unacceptable” in IE” failure cause” of the message.

8.2.4.15 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old channel)

8.2.4.15.1 Definition

8.2.4.15.2 Conformance requirement

The UE shall revert to the old configuration when the UE has failed to reconfigure the new transport channel requested, and then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message to UTRAN.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.15.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.15.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_DCH state. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes the new transport channel parameters. However, SS does not reconfigure the new transport channel accordingly. Hence, the UE shall experience a failure in the reconfiguration process. After T312 expiry, the UE shall revert to the old channel configuration. Then the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Message includes IE“Downlink DPCH Info” and IE“Uplink DPCH Info”
2				SS does not reconfigure the transport channel causing the UE to detect a physical channel failure.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	After T312 expiry the UE shall revert to the old configuration and transmit this message.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	TRANSPORT CHANNEL RECONFIGURATION FAILURE
Failure cause	Physical channel failure
Other information element	Not checked

8.2.4.15.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value “physical channel failure” in IE” failure cause”.

8.2.4.16 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.4.16.1 Definition

8.2.4.16.2 Conformance requirement

The UE shall initiate a RRC re-establishment procedure when it fails to revert to the old channel configuration, following a physical channel failure in the transport channel reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.16.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure, when the UE cannot reconfigure the new transport channel for the failure of L1 configuration and subsequently fails to revert to the old configuration after T312 expiry.

8.2.4.16.4 Method of test

Initial Condition

System Simulator : 2 cells - Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in a cell 1. SS begins to broadcast the BCCH of cell 2 at a power level lower than in cell 1, and then it transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE in cell 1. The message includes a new set of transport channel parameters. However, the SS does not reconfigure L1 and the new transport channel accordingly. At the same time, it deletes the current channel configurations in cell 1. As a result, the UE cannot reconfigure the new transport channel and an attempt to revert to the old configuration fails. The UE shall then find that cell 2 is available, camp onto it, and transmits an RRC CONNECTION RE-ESTABLISHMENT REQUEST message. This message shall include the IE "U-RNTI" on the uplink CCCH. When the SS receives this message, it transmits an RRC CONNECTION RE-ESTABLISHMENT message, which specifies a new TFCS according to the new transport channel used. After the UE receives this message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to transmit BCCH in cell 2
2		←	TRANSPORT CHANNEL RECONGURATION	
3				The SS does not reconfigure L1 and transport channel, it also deletes its current contexts for cell 1.
4				The UE shall experience a failure to reconfigure a new transport channel and also fails to revert to old configuration.
5		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell 2, camp onto it, and then transmits this message which includes the IE "U-RNTI".
6		←	RRC CONNECTION RE-ESTABLISHMENT	Including the new TFCS according to the new transport channel.
7		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None

8.2.4.16.5 Test requirement

After step4 the UE shall find the presence of cell 2, enter CELL_FACH state, and transmit RRC RE-ESTABLISHMENT REQUEST message to attempt to setup the RRC connection in cell 2.

After step7 the UE shall successfully re-establish the RRC connection in cell 2.

8.2.4.17 Transport Channel Reconfiguration from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.17.1 Definition

8.2.4.17.2 Conformance requirement

The UE shall keep its old configuration when it receives another TRANSPORT CHANNEL RECONFIGURATION message before it can configure the transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received earlier. The UE shall transmit an ~~RRC STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.17.3 Test purpose

To confirm that the UE keeps its configuration and transmits an ~~RRC STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message when it receives another TRANSPORT CHANNEL RECONFIGURATION message before the completion of an earlier request for transport channel reconfiguration.

8.2.4.17.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before it has successfully configured the transport channel based on an earlier request. It shall respond by keeping the old configuration and then transmitting an ~~RRC STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The content of the failure message shall indicate ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Includes the IE“Uplink DPCH info”
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the elapse of the activation time specified in step 1.
3		→	~~RRC STATUS~~ <u>TRANSPORT CHANNEL RECONFIGURATION FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	~~“RRC STATUS TRANSPORT CHANNEL RECONFIGURATION FAILURE”~~
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.4.18.5 Test requirement

After step2 the UE shall keep its configuration and transmit an ~~RRC STATUS TRANSPORT CHANNEL RECONFIGURATION FAILURE~~ message on the DCCH using AM RLC, setting the value to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

8.2.4.18 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception)**8.2.4.18.1 Definition****8.2.4.18.2 Conformance requirement**

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes a spare value in the mandatory IE “DRX indicator”. The UE shall then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message, specifying “protocol error” in IE “failure cause” and also “Information element value not comprehended” in IE “Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.18.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if it receives a TRANSPORT CHANNEL RECONFIGURATION message which uses a spare value in the mandatory IE “DRX indicator”.

8.2.4.18.4 Method of test**Initial Condition**

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes a spare value in the mandatory IE “DRX indicator”. The UE shall keep the old configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall contain the value “protocol error” in IE “failure cause” and also “Information element value not comprehended” in IE “Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains a error in one of the mandatory IE in the message.
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.18.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The content of the message shall specify "protocol error" in IE "failure cause" and also "Information element value not comprehended" in IE "Protocol error cause".

8.2.4.19 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Success with no transport channel type switching

8.2.4.19.1 Definition

8.2.4.19.2 Conformance requirement

The UE shall remain in CELL_FACH state and transition from CELL_FACH to CELL_FACH in the another cell requested in the received TRANSPORT CHANNEL RECONFIGURATION message.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.19.3 Test purpose

To confirm that the UE reconfigures a new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.19.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new transport channel parameters for Hand Over. The UE reconfigures the new transport channel and transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to broadcast the BCCH in cell 2.
2		←	TRANSPORT CHANNEL RECONGURATION	Including Primary CPICH Info
3				Reconfiguration of a new transport channel
4		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None

8.2.4.19.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_FACH in the another cell and continue to communicate with the SS on the DCCH using the existing transport channel.

8.2.4.20 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.4.20.1 Definition

8.2.4.20.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.20.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received TRANSPORT CHANNEL RECONFIGURATION message specifies unsupported configuration parameters.

8.2.4.20.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters of the UE. The UE transmits a TRANSPORT

CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the event “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Including unsupported configuration by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the settings used by the transport channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements	
-Uplink transport Channels	
-Added or Reconfigured TrCH information list	Number of Transport blocks = 4096
-Downlink transport Channels	
-Added or Reconfigured TrCH information list	Selected value as the UE can not support. Number of Transport blocks = 4096

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	“TRANSPORT CHANNEL RECONFIGURATION FAILURE”
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.4.20.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating “configuration unacceptable” in IE” failure cause”.

8.2.4.21 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Failure (Physical channel failure)

8.2.4.21.1 Definition

8.2.4.21.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a TRANSPORT CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.21.3 Test purpose

To confirm that the UE perform a cell reselection and cell update procedure when the it fail to access the assigned physical channel, according to a TRANSPORT CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

8.2.4.21.4

Method of test

Initial Condition

System Simulator : 3 cells Cell 1 is active, Cell 2 is inactive, Cell 3 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a TRANSPORT CHANNEL RECONFIGURATION message, resulting in the UE to attempt to transit from CELL_FACH in cell 1 to CELL_FACH in cell 3. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 3. After the UE successfully camp onto cell 2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_FACH in cell 1 to CELL_FACH in cell 3
2			BCCH	The SS starts to broadcast the BCCH in cell 2.
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_PCH state.

Specific Message Contents

None

8.2.4.21.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.4.22 Transport Channel Reconfiguration from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.22.1

Definition

8.2.4.22.2

Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT CHANNEL RECONFIGURATION message, before the UE completes the configuration of the transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message received earlier. The UE shall transmit an ~~RRC STATUS~~ TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.22.3 Test purpose

To confirm that the UE keeps its current configuration, transmits an ~~RRG STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message when it receives another TRANSPORT CHANNEL RECONFIGURATION message before the completion of an earlier reconfiguration request.

8.2.4.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before the UE has successfully configured the transport channel specified in an earlier message, the UE keeps the old configuration. After that, the UE shall transmit an ~~RRG STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Including IE“Uplink DPCH info”
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the time specified in IE“Activation Time Info” of message in step 1 has elapsed.
3		→	~~RRG STATUS~~ <u>TRANSPORT CHANNEL RECONFIGURATION FAILURE</u>	The UE shall not change the configuration.

Specific Message Contents

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the corresponding message found in the default contents of layer 3 messages for RRC tests with the following exceptions:

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]

~~RRG STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	~~“RRG STATUS~~ <u>TRANSPORT CHANNEL RECONFIGURATION FAILURE</u>
~~Protocol error information~~ <u>Failure cause</u>	~~“Message not compatible with receiver state”~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.4.22.5 Test requirement

After step2 the UE shall keep its configuration and transmit an ~~RRG STATUS~~TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

8.2.4.23 Transport channel reconfiguration from CELL_FACH to CELL_FACH:
Failure (Invalid message reception)

8.2.4.23.1 Definition

8.2.4.23.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which makes use of a spare value in the mandatory IE" DRX indicator". Then it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message with the value "protocol error" set in IE" failure cause" and also "Information element value not comprehended" in IE" Protocol error cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.23.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received TRANSPORT CHANNEL RECONFIGURATION message comprises a spare value in the mandatory IE" DRX indicator".

8.2.4.23.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes a spare value in the mandatory IE" DRX indicator". The UE shall keep the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying "protocol error" in IE" failure cause" and also indicating "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	Contains an illegal value for a mandatory IE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT CHANNEL RECONFIGURATION FAILURE"
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.4.23.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The message shall specify "protocol error" in IE" failure cause" and set value "Information element value not comprehended" in IE" Protocol error cause".

8.2.5 Transport format combination control

8.2.5.1 Transport format combination control in CELL_DCH : restriction

8.2.5.1.1 Definition

8.2.5.1.2 Conformance requirement

The UE shall change the subset of allowed transport format combination of uplink when the UE receives TRANSPORT FORMAT COMBINATION CONTROL message.

Reference

3GPP TS 25.331 clause 8.2.5

8.2.5.1.3 Test purpose

To confirm that the UE do not transmit data on the DTCH in the uplink direction, following the reception of TRANSPORT FORMAT COMBINATION CONTROL message sent from the SS, which is set to “zero” in IE” Minimum allowed Transport format combination index”.

8.2.5.1.4 Method of test

Initial Condition

System Simulator : 1cell

UE :CELL_DCH

Test Procedure

The UE establishes a radio access bearer on the DCH for a communication. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message, which indicates that only TFC₀ is allowed on the uplink for DCH transport channel. The UE shall reconfigure the TFCS, stop any transmission on DTCH logical channel and then continues the communication on DCCH only.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE s in CELL_DCH state with a DTCH logical channel allocated for communication between UE and SS
2		←	TRANSPORT FORMAT COMBINATION CONTROL	Set to “zero” in IE” Minimum allowed Transport format combination index”.
3				The UE shall transmit any data on the DTCH.

Specific Message Contents

TRANSPORT FORMAT COMBINATION CNTROL

Information Element	Value/remark
TrCH information elements -Minimum allowed Transport format combination index	Set to “zero”

8.2.5.1.5 Test requirement

After step2 the UE shall stop transmitting data on the DTCH in the uplink.

8.2.5.2 Transport format combination control in CELL_DCH: release a restriction

8.2.5.2.1 Definition

8.2.5.2.2 Conformance requirement

The UE shall change the subset of allowed transport format combination of uplink when it receives TRANSPORT FORMAT COMBINATION CONTROL message, specifying that an existing restriction for the usage of TFCS be removed.

Reference

GPP TS 25.331 clause 8.2.5

8.2.5.2.3 Test purpose

To confirm that the UE resume transmission of data on the DTCH on the uplink, following the reception of TRANSPORT FORMAT COMBINATION CONTROL message which is set to “one” as the prior used transport format combination number in IE” Minimum allowed Transport format combination index”.

8.2.5.2.4 Method of test

Initial Condition

System Simulator : 1cell

UE : CELL_DCH with DTCH allocated but fully restricted.

Test Procedure

The UE is in CELL_DCH state with DTCH allocated but fully restricted. The UE cannot transmit the data on the DTCH, as a result of the restriction on the transport format combination. Next, the SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message which is set to “one” in IE” Minimum allowed Transport format combination index”

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				No data transmission on the DTCH with a restriction in the uplink direction, following the execution of test 8.1.2.5.1.
2		←	TRANSPORT FORMAT COMBINATION CONTROL	Set to "one" IE" Minimum allowed Transport format combination index".
3				The UE begins to transmit the data on the DTCH.

Specific Message Contents

TRANSPORT FORMAT COMBINATION CONTROL

Information Element	Value/remark
TrCH information elements -Minimum allowed Transport format combination index	Set to "one"

8.2.5.2.5 Test requirement

After step2 the UE shall begin to transmit the data on the DTCH in the uplink.

8.2.5.3 Transport format combination control in CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.5.3.1 Definition

8.2.5.3.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another TRANSPORT FORMAT COMBINATION CONTROL message before the UE reconfigures the transport channel completely according to a similar message received earlier. The UE shall transmit an TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC indicating "~~Message not compatible with receiver state~~" "incompatible simultaneous reconfiguration" in IE "Protocol error cause" "failure cause".

Reference

3GPP TS 25.331 clause 8.2.5

8.2.5.3.3 Test purpose

To confirm after the UE receive TRANSPORT FORMAT COMBINATION CONTROL message, it transmits TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and keep the TFC subset as before the TRANSPORT FORMAT COMBINATION CONTROL message

8.2.5.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH

Test Procedure

The UE establishes a radio access bearer on the DCH for to be used for user-data exchange. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message, which includes a full restriction of the TFCS used in

the uplink. The UE cannot reconfigures the TFCS, then the UE transmits TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and continues the communication.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in CELL_DCH connected state With a DTCH logical channel for user-data communication
2		←	TRANSPORT CHANNEL RECONFIGURATION	Requesting for a change in semi-static transport format for DCH carrying the DTCH. The dynamic part remains unchanged.
3		←	TRANSPORT FORMAT COMBINATION CONTROL	Requesting for a full restriction on TFCS for the DCH carrying DTCH.
4		→	TRANSPORT FORMAT COMBINATION CONTROL FAILURE	The UE shall keep the TFC subset as before the TRANSPORT FORMAT COMBINATION CONTROL message was received
5				The UE does not change the configuration of TFC and the UE continues reconfigure the transport channel DCH
6			TRANSPORT CHANNEL RECONFIGURATION COMPLETE	UE shall resume exchange of data over the DTCH logical channel.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
TrCH Information Elements - Uplink transport channels - Added or reconfigured TrCH information list - Transport channel identity - Semi-Static Transport Format Information - Type of channel coding	2 Select a different coding scheme from default message content

TRANSPORT FORMAT COMBINATION CONTROL

Information Element	Value/remark
DPCH TFCS in Uplink - Subset Representation - Allowed TFIs	Restricted TrCH information Not Present (All TFCs are restricted)

TRANSPORT FORMAT COMBINATION CONTROL FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT FORMAT COMBINATION CNTROL FAILURE"
Failure cause	Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.5.3.5 Test requirement

After step3 the UE continue the transport channel reconfiguration as if no TRANSPORT FORMAT COMBINATION CONTROL message was received. Then it shall transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC, stating the reason "Incompatible simultaneous reconfiguration" in IE" Failure cause".

After step6 the UE shall resume communication with SS on DTCH using the requested channel coding scheme on the transport blocks.

8.2.5.4 Transport format combination control in CELL_DCH: Failure (Invalid message reception)

8.2.5.4.1 Definition

8.2.5.4.2 Conformance requirement

The UE shall keep old configuration when it receives a TRANSPORT FORMAT COMBINATION CONTROL message which using a spare value in the mandatory IE "Minimum allowed Transport format combination index". It shall then transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message, indicating "protocol error" in IE "failure cause" and "Information element value not comprehended" in IE "Protocol error cause".

Reference

GPP TS 25.331 clause 8.2.5

8.2.5.4.3 Test purpose

To confirm after the UE receives an invalid TRANSPORT FORMAT COMBINATION CONTROL message, it transmits TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and keep the TFC subset as if no TRANSPORT FORMAT COMBINATION CONTROL message has been received.

8.2.5.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH

Test Procedure

The UE establishes a radio access bearer on the DCH for a communication. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message, which uses a spare value in the mandatory IE "Minimum allowed Transport format combination index". The UE shall then transmit TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and continues the communication using the radio access bearer.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on the DTCH for a communication
2		←	TRANSPORT FORMAT COMBINATION CONTROL	Contains an error in a mandatory IE.
3		→	TRANSPORT FORMAT COMBINATION CONTROL FAILURE	The UE shall not change the configuration

Specific Message Contents

TRANSPORT FORMAT COMBINATION CONTROL

Information Element	Value/remark
DPCH TFCS in uplink - Minimum allowed Transport format combination index	Set to the value "MaxTFCValue"

TRANSPORT FORMAT COMBINATION CONTROL FAILURE

Information Element	Value/remark
Message Type	"TRANSPORT FORMAT COMBINATION CONTROL FAILURE"
Failure cause	"protocol error"
Protocol error information - Protocol error case	Information element value not comprehended
Other information element	Not checked

8.2.5.4.5 Test requirement

After step3 the UE shall keep its configuration before the TRANSPORT FORMAT COMBINATION CONTROL message was received and transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC. The UE shall set the value "protocol error" in IE "Failure cause" and the value "information element not comprehended" in IE "protocol error information". The UE shall continue communicate with SS using the radio access bearer.

8.2.6 Physical channel reconfiguration

8.2.6.1 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Success

8.2.6.1.1 Definition

8.2.6.1.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message received, which is used for hard handover purposes. It shall be able to communicate with the UTRAN on the new frequency subsequently.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.1.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message received from the SS.

8.2.6.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes a new physical channel parameter specified as the changing of frequency. The UE reconfigures the new physical channel and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Including a new frequency information
2				Reconfiguration of physical channel
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.1.5 Test requirement

After step3 the UE shall continue to communicate with SS on the new physical channel.

8.2.6.2 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Unsupported or Unacceptable configuration)

8.2.6.2.1 Definition

8.2.6.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message which includes an unsupported configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason “configuration unacceptable” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.2.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters for the UE.

8.2.6.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes unsupported configuration parameters as the frequency cannot be supported by the UE. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Includes an unsupported configuration as the frequency cannot be supported by the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the physical channel and continue to communicate using the old configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.6.2.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC and set “configuration unacceptable” in IE” failure cause”.

8.2.6.3 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Physical channel failure and reversion to old channel)

8.2.6.3.1 Definition

8.2.6.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by the expiry of timer T312, and then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating “physical channel failure” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new

physical channel according to the received PHYSICAL CHANNEL RECONFIGURATION message by timer T312 expiry.

8.2.6.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes new frequency parameters. However, the SS does not reconfigure the new physical channel. The UE is expected to encounter a failure to reconfigure the new physical channel and after T312 timer expiry the UE shall revert to the old configuration. Finally, the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC specifies “physical channel failure” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Including a new frequency information
2				The SS does not reconfigure the physical channel so that the UE fails to reconfigure to the new physical channel.
3		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expiry, the UE shall revert to the old configuration and transmits this message.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.6.3.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value “physical channel failure” in IE” failure cause”.

8.2.6.4 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Physical channel failure and reversion failure)

8.2.6.4.1 Definition

8.2.6.4.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration, after the detection of physical channel failure during the course of executing a physical channel reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.4.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure when the UE cannot reconfigure the new physical channel for the failure of L1 configuration and for the failure of the reversion to the old configuration.

8.2.6.4.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes new uplink and downlink frequency parameters and does not reconfigure L1. The UE is expected to fail to reconfigure the new physical channel and tries to revert to the old configuration after T312 expiry. The SS then deletes the old physical channel so that the UE would perform cell reselection and finds cell 2. It shall then transmit an RRC CONNECTION RE-ESTABLISHMENT REQUEST message which includes the IE "U-RNTI" on the uplink CCCH. The SS transmits an RRC CONNECTION RE-ESTABLISHMENT message which includes a new TFCS according to the new transport channel. After the UE receives an RRC CONNECTION RE-ESTABLISHMENT message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS transmits the BCCH in cell 2.
2		←	PHYSICAL CHANNEL RECONFIGURATION	The message includes new frequency information
3				SS does not reconfigure the physical channel to reflect the changes in step 2, at the same time, it deletes the old configuration so the UE cannot reconfigure the new physical channel and cannot revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE finds a new cell.2 and then transmits this message which includes the IE "U-RNTI" .
5		←	RRC CONNECTION RE-ESTABLISHMENT	This message indicates a new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	

Specific Message Contents

None.

8.2.6.4.5 Test requirement

After step3 the UE shall find the availability of cell 2, enter CELL_FACH state, and transmits RRC CONNECTION RE-ESTABLISHMENT message using RLC-TM mode on the uplink DCCH.

After step6 the UE shall be able to successfully re-establish an RRC connection in cell 2.

8.2.6.5 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Incompatible simultaneous reconfiguration)

8.2.6.5.1 Definition

8.2.6.5.2 Conformance requirement

The UE shall keep its old configuration when the UE receives another PHYSICAL CHANNEL RECONFIGURATION message before it completes the current reconfiguration according to an earlier PHYSICAL CHANNEL RECONFIGURATION message. The UE shall transmit an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.5.3 Test purpose

To confirm that the UE keeps its current configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the completion of an existing physical channel reconfiguration .

8.2.6.5.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before it reconfigures the physical channel, the UE keeps the old configuration and transmits an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall indicate ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the “Activation Time Info” specified in the message in step 1 has elapsed.
3		→	~~RRC STATUS~~ <u>PHYSICAL CHANNEL RECONFIGURATION FAILURE</u>	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

RRC STATUS PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ <u>Failure cause</u>	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.6.5.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an **RRC STATUS PHYSICAL CHANNEL RECONFIGURATION FAILURE** message on the DCCH using AM RLC, which shall be set to ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

8.2.6.6 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Failure (Invalid message reception)**8.2.6.6.1 Definition****8.2.6.6.2 Conformance requirement**

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message, which includes the spare value in the mandatory IE “DRX indicator”. It shall then transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message which contains the value “protocol error” in IE “failure cause” and also “Information element value not comprehended” in IE “Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.6.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives a PHYSICAL CHANNEL RECONFIGURATION message which uses a spare value in the mandatory IE “DRX indicator”.

8.2.6.6.4 Method of test**Initial Condition**

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE , with a spare value in the mandatory IE “DRX indicator”. The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with a value “protocol error” in IE “failure cause” and also a value “Information element value not comprehended” in IE “Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	This message contains an error in one of the mandatory IEs.
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those found in the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.6.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting value "protocol error" in IE" failure cause" and also setting value "Information element value not comprehended" in IE" Protocol error cause".

8.2.6.7 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Success

8.2.6.7.1 Definition

8.2.6.7.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message when asked to perform a transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.7.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message received from the SS.

8.2.6.7.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE. The UE shall then reconfigure the new physical channel according to this message. Following this, it shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the RACH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2				Reconfiguration of physical channel
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.7.5 Test requirement

After step3 the UE shall transit from CELL_DCH to CELL_FACH and continue to communicate with SS on the common physical channel.

8.2.6.8 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.6.8.1 Definition

8.2.6.8.2 Conformance requirement

The UE shall keep its old configuration when it receives a PHYSICAL CHANNEL RECONFIGURATION message which includes unsupported configuration parameters. It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason “configuration unacceptable” indicated in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.8.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.6.8.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters. Specifically, the frequency cannot be supported by the UE. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which and indicating “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message specifies the usage of an unsupported configuration for the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the physical channel and continue to communicate with the SS using the original configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.6.8.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason “configuration unacceptable” specified in IE” failure cause”.

8.2.6.9 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Physical channel failure)

8.2.6.9.1 Definition

8.2.6.9.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_DCH to CELL_FACH.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.9.3 Test purpose

To confirm that the UE perform a cell reselection and cell update procedure when the it fail to access the assigned physical channel, according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_DCH to CELL_FACH.

8.2.6.9.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a PHYSICAL CHANNEL RECONFIGURATION message, resulting in the UE to attempt to transit from CELL_DCH to CELL_FACH. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 1. After the UE successfully camp onto cell 2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_DCH to CELL_FACH
2			BCCH	The SS starts to broadcast the BCCH in cell 2.
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_PCH state.

Specific Message Contents

None

8.2.6.9.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.6.10 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.10.1 Definition

8.2.6.10.2 Conformance requirement

The UE shall keep its old configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the existing reconfiguration request has been completed. The UE shall transmit an **RRC STATUS** **PHYSICAL CHANNEL RECONFIGURATION FAILURE** message on the DCCH using AM RLC, indicating the reason "~~Message not compatible with receiver state~~" "incompatible simultaneous reconfiguration" in IE "~~Protocol error cause~~" "failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.10.3 Test purpose

To confirm that the UE keeps its original configuration when the UE receives a second PHYSICAL CHANNEL RECONFIGURATION message before it reconfigures the physical channel according to an earlier PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.10.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the UE reconfigures the physical channel, the UE shall keep the old configuration and transmits an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall specify value ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause”~~“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the time specified in “Activation Time Info” in the message of step 1.
3		→	~~RRC STATUS~~ PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ Incompatible simultaneous reconfiguration
Other information element	Not checked

8.2.6.10.5 Test requirement

After step2 the UE shall keep its old configuration, transmit an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, and set the cause ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause”~~“failure cause”.

8.2.6.11 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Failure (Invalid message reception)

8.2.6.11.1 Definition

8.2.6.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message which includes the spare value in the mandatory IE” DRX indicator” . It shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message, indicating “protocol error” in IE” failure cause” and indicating “Information element value not comprehended” in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.11.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received a PHYSICAL CHANNEL RECONFIGURATION message uses a spare value in the mandatory IE" DRX indicator".

8.2.6.11.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which contains a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, which comprises the reason "protocol error" in IE" failure cause" and reason "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message contains a error in one of the mandatory IE.
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.11.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The failure message shall specify "protocol error" in IE" failure cause" and include "Information element value not comprehended" in IE" Protocol error cause".

8.2.6.12 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Success

8.2.6.12.1 Definition

8.2.6.12.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, which triggers a transition from CELL_FACH to CELL_DCH.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.12.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message received from the UTRAN, in the case of an assignment of dedicated physical resource from the common physical channels used previously by the UE.

8.2.6.12.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to start a transition from CELL_FACH to CELL_DCH. The UE shall reconfigure the new physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2				The UE shall reconfigure the physical channel in order to start using the dedicated channels allocated.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.12.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_DCH and continue to communicate with SS on the dedicated physical channel.

8.2.6.13 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Unsupported or Unacceptable configuration)

8.2.6.13.1 Definition

8.2.6.13.2 Conformance requirement

The UE shall keep its old configuration when the it receives a PHYSICAL CHANNEL RECONFIGURATION message, which specifies unsupported configuration parameters for the UE. It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the cause “configuration unacceptable” in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.13.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.6.13.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes unsupported frequencies for the UE. The PHYSICAL CHANNEL RECONFIGURATION is structured in such a manner as to trigger a transition from CELL_FACH to CELL_DCH in the UE. The UE shall responds with a PHYSICAL CHANNEL RECONFIGURATION FAILURE message sent on the DCCH using AM RLC, setting “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Includes unsupported frequencies for the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the physical channel configuration, this message shall be sent using the original allocated physical resource.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.6.13.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, the IE" failure cause" shall be set to "configuration unacceptable".

8.2.6.14 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.6.14.1 Definition

8.2.6.14.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel by timer T312 expiry. It shall report the failure by transmitting a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "physical channel failure" in IE" failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.14.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message by the T312 expiry.

8.2.6.14.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, requesting it to transit from CELL_FACH to CELL_DCH due to a switch in physical resource reallocation. However, it does not reconfigure the new physical channel accordingly but continue to use the old configuration. Consequently, the UE shall fail to reconfigure the new physical channel, and after T312 expiry the UE attempt to revert to the old configuration. Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which reports "physical channel failure" in IE" failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2				The SS does not reconfigure the physical channel, hence the UE shall detect a failure to reconfigure to the new physical channel.
3		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expiry the UE reverts to the old configuration and transmits this message.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure
Other information element	Not checked

8.2.6.14.5 Test requirement

After step2 the UE shall revert to the old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying “physical channel failure” in IE” failure cause”.

8.2.6.15 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.6.15.1 Definition

8.2.6.15.2 Conformance requirement

The UE shall perform an RRC connection re-establishment procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the physical channel reconfiguration procedure.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.15.3 Test purpose

To confirm that the UE initiates an RRC connection re-establishment procedure after it fails to reconfigure the new physical channel and experiences a subsequent failure to revert to the old configuration.

8.2.6.15.4 Method of test

Initial Condition

System Simulator : 2 cells- Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH in cell 1

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, but it does not reconfigure L1 accordingly. This is expected to cause the UE to fail to reconfigure to the new physical channel. As a result, the UE shall try to revert to the old configuration after timer T312 expiry. However, the SS deletes the old physical channel before timer T312 has expired. Therefore, UE shall reselect to cell 2 and sends an RRC CONNECTION RE-ESTABLISHMENT REQUEST message, which includes its previously assigned U-RNTI on the uplink CCCH. The SS transmits an RRC

CONNECTION RE-ESTABLISHMENT message, which includes a new TFCS according to the new transport channel used. After the UE receives this message, it reconfigures the new radio connection and transmits an RRC CONNECTION RE-ESTABLISHMENT COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS begins to transmit the BCCH in a cell 2.
2		←	PHYSICAL CHANNEL RECONFIGURATION	
3				The SS does not reconfigure the physical channel and deletes the old configuration. As a result, UE should encounter a failure to reconfigure the new physical channel, then attempt to revert to the old configuration.
4		→	RRC CONNECTION RE-ESTABLISHMENT REQUEST	The UE shall find cell 2 and then transmit this message with its U-RNTI included.
5		←	RRC CONNECTION RE-ESTABLISHMENT	This message specifies a new TFCS according to the new transport channel.
6		→	RRC CONNECTION RE-ESTABLISHMENT COMPLETE	UE shall send this message in the cell 2.

Specific Message Contents

None.

8.2.6.15.5 Test requirement

After step3 the UE shall detect the presence of cell 2, camp onto it, and transmit a RRC CONNECTION RE-ESTABLISHMENT REQUEST message.

After step6 the UE shall successfully re-establish the RRC connection in cell 2.

8.2.6.16 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.16.1 Definition

8.2.6.16.2 Conformance requirement

The UE shall keep its old configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the completion of an earlier physical channel reconfiguration procedure. Then the UE shall transmit an ~~RRC STATUS~~ PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC and indicate ~~“Message not compatible with receiver state”~~ “incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~ “failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.16.3 Test purpose

To confirm that the UE keeps its old configuration, if receives another PHYSICAL CHANNEL RECONFIGURATION message before it manages to complete reconfiguring the physical channel according to an earlier PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.16.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to command the UE to perform a physical channel reconfiguration. The starting time for this action is specified. However, before the passing of the indicated starting time, SS sends another PHYSICAL CHANNEL RECONFIGURATION message. The UE shall stop the existing reconfiguration, maintains the old configuration, and transmits an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~”“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the frame number specified in IE“activation time info” of the message dispatched in step 1.
3		→	~~RRC STATUS~~ PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.6.16.5 Test requirement

After step2 the UE shall keep its old configuration and transmit an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~”“failure cause”.

8.2.6.17 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception)

8.2.6.17.1 Definition

8.2.6.17.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message containing a spare value in the mandatory IE” DRX indicator”. It shall then transmit a PHYSICAL

CHANNEL RECONFIGURATION FAILURE message, set “protocol error” in IE” failure cause” and also set “Information element value not comprehended” in IE” Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.17.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received message uses a spare value in the mandatory IE” DRX indicator”.

8.2.6.17.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which comprises a spare value in the mandatory IE” DRX indicator”. The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting “protocol error” in IE” failure cause” and also setting “Information element value not comprehended” in IE” Protocol error cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Contains a mandatory error due to illegal use of spare value
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.17.5 Test requirement

After step1 the UE shall keep its old configuration, transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with “protocol error” in IE” failure cause” and also “Information element value not comprehended” in IE” Protocol error cause”.

8.2.6.18 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Success

8.2.6.18.1 Definition

8.2.6.18.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message when asked to perform a transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.18.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message received from the SS.

8.2.6.18.4 Method of test

Initial Condition

System Simulator : 2 cells Cell 1 is active, Cell 2 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS starts to broadcast the BCCH in cell 2 and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE. The UE shall then reconfigure the new physical channel according to this message. Following this, it shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the RACH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	BCCH	The SS starts to broadcast the BCCH in cell 2.
2		←	PHYSICAL CHANNEL RECONFIGURATION	
3				Reconfiguration of physical channel
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

None.

8.2.6.18.5 Test requirement

After step3 the UE shall transit from CELL_FACH to CELL_FACH in the another cell and continue to communicate with SS on the common physical channel.

8.2.6.19 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Unsupported or Unacceptable configuration)

8.2.6.19.1 Definition

8.2.6.19.2 Conformance requirement

The UE shall keep its old configuration when it receives a PHYSICAL CHANNEL RECONFIGURATION message which includes unsupported configuration parameters. It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason “configuration unacceptable” indicated in IE” failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.19.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters.

8.2.6.19.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes unsupported configuration parameters. Specifically, the frequency cannot be supported by the UE. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which and indicating “configuration unacceptable” in IE” failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message specifies the usage of an unsupported configuration for the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the physical channel and continue to communicate with the SS using the original configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	63984
- UARFCN downlink(Nd)	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	Configuration unacceptable
Other information element	Not checked

8.2.6.19.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason “configuration unacceptable” specified in IE” failure cause”.

8.2.6.20 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Physical channel failure)

8.2.6.20.1 Definition

8.2.6.20.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE cannot use the assigned physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.20.3 Test purpose

To confirm that the UE perform a cell reselection and cell update procedure when the it fail to access the assigned physical channel, according to a PHYSICAL CHANNEL RECONFIGURATION message, during the transition from CELL_FACH to CELL_FACH in the another cell.

8.2.6.20.4 Method of test

Initial Condition

System Simulator : 3 cells Cell 1 is active, Cell 2 is inactive, Cell 3 is inactive

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state in cell 1. The SS begins to broadcast the BCCH in cell 2 and then transmits a PHYSICAL CHANNEL RECONFIGURATION message, resulting in the UE to attempt to transit from CELL_FACH in cell 1 to CELL_FACH in cell 3. The UE is expected to fail to access the assigned physical channel as the SS ceases downlink transmission in cell 3. After the UE successfully camp onto cell 2, it shall initiate the cell update procedure in cell 2. The procedure completes when the SS confirms UE's cell update request.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message assigns common resources so that the UE is expected to execute a transition from CELL_FACH in cell 1 to CELL_FACH in cell 3
2			BCCH	The SS starts to broadcast the BCCH in cell 2.
3				The UE shall detect a failure to use the assigned common physical channel and try to perform a cell reselection.
4		→	CELL UPDATE	The UE discover the presence of cell 2 and triggers a cell update procedure.
5		←	CELL UPDATE CONFIRM	SS sends this message so that the UE moves to CELL_PCH state.

Specific Message Contents

None

8.2.6.20.5 Test requirement

After step3 the UE shall discover the presence of cell 2, enter CELL_FACH state, and initiate a cell update procedure in that cell.

8.2.6.21 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.21.1 Definition

8.2.6.21.2 Conformance requirement

The UE shall keep its old configuration when it receives another PHYSICAL CHANNEL RECONFIGURATION message before the existing reconfiguration request has been completed. The UE shall transmit an ~~RRG STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating the reason ~~“Message not compatible with receiver state”~~“incompatible simultaneous reconfiguration” in IE ~~“Protocol error cause”~~“failure cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.21.3 Test purpose

To confirm that the UE keeps its original configuration when the UE receives a second PHYSICAL CHANNEL RECONFIGURATION message before it reconfigures the physical channel according to an earlier PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.21.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the UE reconfigures the physical channel, the UE shall keep the old configuration and transmits an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall specify value “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~”“failure cause”.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the time specified in “Activation Time Info” in the message of step 1.
3		→	~~RRC STATUS~~ PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]

~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
~~Protocol error information~~ Failure cause	~~Message not compatible with receiver state~~ <u>Incompatible simultaneous reconfiguration</u>
Other information element	Not checked

8.2.6.21.5 Test requirement

After step2 the UE shall keep its old configuration, transmit an ~~RRC STATUS~~PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, and set the cause “~~Message not compatible with receiver state~~”“incompatible simultaneous reconfiguration” in IE “~~Protocol error cause~~”“failure cause”.

8.2.6.22 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Failure (Invalid message reception)

8.2.6.22.1 Definition

8.2.6.22.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message which includes the spare value in the mandatory IE “DRX indicator” . It shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message, indicating “protocol error” in IE “failure cause” and indicating “Information element value not comprehended” in IE “Protocol error cause”.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.22.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the received a PHYSICAL CHANNEL RECONFIGURATION message uses a spare value in the mandatory IE" DRX indicator".

8.2.6.22.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_FACH

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which contains a spare value in the mandatory IE" DRX indicator". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, which comprises the reason "protocol error" in IE" failure cause" and reason "Information element value not comprehended" in IE" Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	The message contains a error in one of the mandatory IE.
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
DRX indicator	spare value

PHYSICAL CHANNEL RECONFIGURATION FAILURE

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Information element value not comprehended
Other information element	Not checked

8.2.6.22.5 Test requirement

After step1 the UE shall keep its old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The failure message shall specify "protocol error" in IE" failure cause" and include "Information element value not comprehended" in IE" Protocol error cause".

8.2.7 Physical Shared Channel Allocation[TDD only]

[Editor's note : This message is not included in Release99 so this is FFS.]

8.2.8 PUSCH capacity request[TDD only]

[Editor's note : This message is not included in Release99 so this is FFS.]

8.2.9 Downlink outer loop control

8.2.9.1 Downlink outer loop control: Increase is Disallowed

8.2.9.1.1 Definition

8.2.9.1.2 Conformance requirement

The UE shall maintain its existing internal target SIR value after it has received DOWNLINK OUTER LOOP CONTROL message which forbids further adjustment of SIR target. This restriction shall be observed even if the UE has detect that the current SIR target is not sufficient to achieve the downlink quality demanded by the UTRAN.

Reference

3GPP TS 25.331 clause 8.2.9

8.2.9.1.3 Test purpose

To confirm that the UE keeps its target SIR value after it receives a DOWNLINK OUTER LOOP CONTROL message with the IE "Downlink Outer Loop Control" set to "TRUE".

8.2.9.1.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH state with the no restriction by the DL outer loop power control

Test Procedure

The UE is in the CELL_DCH state and the SS adjusts its transmission power as the current SIR estimation by the UE has reached the same target SIR value determined autonomously by the UE. This condition can be observed when the TPC command bits on the DPCCH physical channel has stabilized (consistently alternating between values 0 and 1). The SS transmits the DOWNLINK OUTER LOOP CONTROL message, which is set to "TRUE" in IE "Downlink Outer Loop Control". When the SS generates some error frames, this is expected to cause the measured BLER in the UE to fall below that of that specified in IE "BLER Quality Value" of the RRC CONNECTION SETUP message received earlier. The UE shall detect this change but it maintains the current SIR target value and does not request that SS increases downlink transmission power by setting TPC in DPCCH to "1".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS adjusts its transmission power as such that the measured value of SIR in the UE is the same as the SIR target value determined by the UE. The target SIR value is chosen by the UE in order that the target BLER value requested by SS is achieved.
2		←	DOWNLINK OUTER LOOP CONTROL	Set value "TRUE" in IE "Downlink Outer Loop Control".
3				The SS starts to generate some error frames. The current SIR target in the UE cannot guarantee target BLER value specified earlier.
4				The UE shall keep the existing SIR target value and it shall not request that the DL transmission power be increased using TPC bits in DPCH physical channel.

Specific Message Content

DOWNLINK OUTER POWER CONTROL

Information Element	Value/remark
Integrity check info	Not Present
Downlink Outer Loop Control	
- DL Outer loop control	Increased not allowed
Downlink DPCH power control information	
- DPC Mode	Single

8.2.9.1.5 Test requirement

After step3 the SS shall keep the target SIR value as same as step1 and it shall not request for the downlink transmission power be increased by setting TPC bits to "1".

8.2.9.2 Downlink outer loop control: Increase is Allowed

8.2.9.2.1 Definition

8.2.9.2.2 Conformance requirement

The downlink power control procedure is used to control the downlink outer loop power control running in the UE. If the UE receives the DOWNLINK OUTER LOOP CONTROL message with value "FALSE" in IE "Downlink Outer Loop Control", it shall remove any existing restriction of DL outer loop power control. The UE shall begin to increase its DL target SIR value and make the DL transmission power increase until the desired BLER value for the DPCH transport channel has been attained.

Reference

3GPP TS 25.331 clause 8.2.9

8.1.2.9.2.3 Test purpose

To confirm that the UE begins to exercise DL outer loop power control, in order to increase the target SIR value, after it had received a DOWNLINK OUTER LOOP CONTROL message specifying "FALSE" in IE "Downlink Outer Loop Control".

8.2.9.2.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH state with the restriction by the DL outer loop power control Test Procedure

The UE is in the CELL_DCH state with the restriction by the DL outer loop power control. The internal SIR target value determined by the UE is expected to be insufficient to allow the UE to achieve target BLER figure. The SS transmits the DOWNLINK OUTER LOOP CONTROL message, setting the value "FALSE" in IE "Downlink Outer Loop Control". Then the UE shall update its SIR target value and make the DL transmission power increase.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the same state as the end of step 4 in Clause 8.1.2.9.1.3.
2		←	DOWNLINK OUTER LOOP CONTROL	Set the value "FALSE" in IE "Downlink Outer Loop Control".
3				The UE shall begin to request that the DL transmission power be increased. This is done by setting the TPC field to "1" in DPCCH.

8.2.9.2.5 Test requirement

After step 3 the SS shall increase the DL transmission power more than step 1.

8.2.9.3 Downlink outer loop control: Failure (Invalid message reception)

8.2.9.3.1 Definition

8.2.9.3.2 Conformance requirement

The UE shall correctly handle an erroneous DOWNLINK OUTER LOOP CONTROL message, and perform the appropriate error-handling procedure. Specifically, it shall not alter the downlink power control mechanism, which is currently being applied. It shall also transmit a RRC STATUS message using RLC-AM mode on the DCCH channel, state the appropriate failure cause.

Reference

3GPP TS 25.331 clause 8.2.9

8.2.9.3.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC when it receives a DOWNLINK OUTER LOOP CONTROL message, containing an invalid conditional IE with respect to the state of the UE.

8.2.9.3.4 Method of test

Initial Condition

System Simulator : 1 cell

UE : CELL_DCH and the integrity protection algorithm is not applied.

Test Procedure

The UE is in CELL_DCH state. Next, the SS transmits another DOWNLINK OUTER LOOP CONTROL message, removing the power increase restriction, and at the same time includes the conditional IE "Integrity Check Info". The UE shall not request for an increase in the downlink transmission power through the TPC command field in DPCCH. It shall transmit RRC STATUS message stating the value "Message extension not comprehended" in IE "protocol cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				Executes step 1 to step 3 in Clause 8.1.2.9.1.3.
2			DOWNLINK OUTER LOOP CONTROL	Contains an unexpected information element "Integrity Check Info" in the message. See specific message content.
3		→	RRC STATUS	The UE shall request for an increase in downlink transmission power. The message shall specify cause "Message extension is not comprehended" in IE "Protocol Error Information"
4				The UE shall not request for an increase in downlink transmission power. SS verifies the value of TPC field in DPCCH.

Specific Message Content

DOWNLINK OUTER LOOP CONTROL (Step 1)

The contents of DOWNLINK OUTER LOOP CONTROL message in this test case is identical to those of the default contents of layer 3 messages for RRC tests with the following exceptions:

Information Element	Value/remark
Integrity Check Info	Present
- Message authentication code	An arbitrary 32-bits string
- RRC Message Sequence	An arbitrarily chosen integer from range (0....15)

RRC STATUS

Information Element	Value/remark
Message Type	
Protocol error information	Information element value not comprehended
Other information element	Not checked

8.2.9.3.5 Test requirement

After step4 the UE shall keep its restriction for increase in downlink transmission power and not set TPC command fields in DPCCH to "1". It shall transmit an RRC STATUS message on the DCCH using AM RLC, indicating "Information element value not comprehended" in IE "Protocol error cause".

8.3.4.6 Active set update in soft handover: Subsequent reception of ACTIVE SET UPDATE message / Incompatible simultaneous reconfiguration

8.3.4.6.1 Definition

8.3.4.6.2 Conformance Requirements

The UE shall ~~keep its old configuration, when it receives~~ ignore an subsequent ACTIVE SET UPDATE message, before while it is still processing ~~can complete~~ an existing active set update procedure. It shall continue to configure itself in accordance to the first ACTIVE SET UPDATE message received. When encountering a “simultaneous reconfiguration” situation, the UE shall then transmit an RRC STATUS ACTIVE SET FAILURE message on the DCCH using AM RLC with value “Message not compatible with receiver state incompatible simultaneous reconfiguration” set in IE_” ~~Protocol error/failure~~ cause”. Then the UE shall continue to ~~update its active set~~ execute the ordered reconfiguration (for example due to a radio bearer reconfiguration) as if the ~~second~~ ACTIVE SET UPDATE message has not been received.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.6.3 Test Purpose

To confirm that the UE ~~resumes~~ continue to execute the prior active set update request, when it receives a subsequent ACTIVE SET UPDATE message before it has completely executed the first update procedure. To confirm that the UE transmits an ~~RRC STATUS ACTIVE SET FAILURE~~ message to report the detection of a “incompatible simultaneous reconfiguration” condition, when an ACTIVE SET UPDATE message was received before the UE can complete an on-going radio bearer reconfiguration procedure.

Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active

UE : CELL_DCH in cell 1 and cell 2

8.3.4.6.4 Test Procedure

The UE establishes a radio access bearer in CELL_DCH state in cell 1 and cell 2. SS transmits an ACTIVE SET UPDATE message to request for the removal of cell 1 from the active list. When the UE sends an acknowledgement for this message from its RLC entity, SS immediately transmits a second ACTIVE SET UPDATE message, which specifies ~~that~~ cell 1 to be added into the active list. SS verifies that the UE ceases transmission on the radio link associated with cell 1 when the activation time indicated in the first ACTIVE SET UPDATE message is reached. Next, SS sends a RADIO BEARER RELEASE message using AM-RLC on the DCCH. In this message, SS requests the release of the radio access bearer. When RLC acknowledgement has been received from the UE, SS immediately sends an ACTIVE SET UPDATE message. In this message, SS commands the UE to add cell 1 into its active list with the activation time set to “now”. The UE shall react by transmitting RRC STATUS ACTIVE SET UPDATE FAILURE message on the DCCH using AM-RLC mode. In this message, the IE_” ~~Protocol error/failure~~ cause” shall be set to “Message not incompatible with receiver state simultaneous reception”. Subsequently When the activation time stated in RADIO BEARER RELEASE message has elapsed, the UE shall transmit the ACTIVE SET UPDATERADIO BEARER RELEASE COMPLETE message when the reconfiguration from the earlier active set update is completed to inform that the radio assigned access bearer is released. When SS receives this message, it verifies that UE continues to communicate with the SS on the radio link in associated with cell 2 only, and that no user data are exchanged on the previously available radio access bearer.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in both cell 1 and cell 2.
2		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC, requesting for cell 1 to be removed from the active set.
3		←	ACTIVE SET UPDATE	Immediately after UE acknowledges the message in step 2, SS transmits this message. This message specifies that cell 1 be added into the active set.
4	→		~~RRC STATUS~~	~~UE shall transmit this message with the IE "Protocol Error Cause" set to "Message not compatible with receiver state". SS waits until the activation time stated in step 2 has elapsed, and verifies that the UE stops transmitting on the radio link of cell 1.~~
5		→	ACTIVE SET UPDATE COMPLETE	UE shall transmit this message to signal the completion of the active set update procedure triggered in step 2.
6		←	<u>RADIO BEARER RELEASE</u>	~~UE shall cease all communication with cell 1 and continue to communicate with cell 2 only. SS checks that UE stops all uplink activities on the radio link associated with cell 1. SS requests that the radio access bearer allocated to the UE be released.~~
<u>7</u>		←	<u>ACTIVE SET UPDATE</u>	SS indicates that the UE shall <u>reinstate cell 1 into its active set, immediately after RLC acknowledgement is received for the message sent in step</u>
<u>8</u>	→		<u>ACTIVE SET UPDATE FAILURE</u>	In IE "failure cause", the reason <u>"incompatible simultaneous reconfiguration"</u> shall be stated.
<u>9</u>	→		<u>RADIO BEARER RELEASE COMPLETE</u>	The UE shall send this message when the activation time specified in step 6 is reached. Upon reception of this message, SS verifies that there is no more uplink user traffic on the radio access bearer.

Specific Message Contents

ACTIVE SET UPDATE (Step 2)

Use ~~The default message for this type found in Annex A~~ to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	Not Present.
Radio link removal information	
- Primary CPICH info	
- Primary scrambling code	Set to the P-CPICH scrambling code assigned to cell 1.

ACTIVE SET UPDATE (Step 3)

Use the default message for this type found in Annex A, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 1
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- CHOICE Spreading Factor	512
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	Not Present

RRC STATUS

Information Element	Value/remark
Protocol Error Cause	Check if it's set to 'Message not compatible with receiver state'

ACTIVE SET UPDATE COMPLETE (Step 5)

Only the message type for this message is checked.

RADIO BEARER RELEASE (Step 6)

Use the same message sub-type titled "AM or UM (The others of speech in CS)" found in Annex A.

ACTIVE SET UPDATE (Step 7)

Use the same message as in that for step 3, with the following exception:

Information Element	Value/remark
Activation Time	Not Present – use default

ACTIVE SET UPDATE FAILURE (Step 8)

Information Element	Value/remark
Failure Cause	Check to see if set to "Incompatible simultaneous reconfiguration"

RADIO BEARER RELEASE COMPLETE (Step 9)

Information Element	Value/remark
Integrity check Info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked

8.3.4.6.5

Test Requirement

After step 5 the UE shall ignore the second ACTIVE SET UPDATE message received, terminate the radio link in relation to cell 1, and transmit ACTIVE SET UPDATE COMPLETE using AM-RLC on the uplink DCCH of cell 2.

After step ~~3-7~~ the UE shall report the “incompatible simultaneous reconfiguration” error by transmitting ~~RRC STATUS~~ ACTIVE SET UPDATE FAILURE message on the DCCH. ~~In this message, the value “Message not compatible with receiver state” shall be set in IE “Protocol error cause”.~~

~~After step 4 the UE shall transmit ACTIVE SET UPDATE COMPLETE message on the uplink DCCH of cell 2.~~

~~After step 5 the UE shall continue to communicate normally with the SS using the radio link from cell 2.~~

~~After step 8 the UE shall send RADIO BEARER RELEASE COMPLETE message to cell 2 on the uplink DCCH, using AM-RLC mode. The UE shall stop all transmissions of user traffic on the radio access bearer assigned.~~

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00172**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 020

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source: Matsushita Communication Industry Co.,Ltd

Date: 28/08/2000

Subject: Updates to "Transport Format Combination Set" IE

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

In CR 298r2 for TS 25.331 V3.2.0, several changes were proposed and agreed for TFCS IE. In conjunction to these changes, the following modifications are suggested to the affected messages found in clauses 8.3.1.14 and Annex A of TS 34.123-1 V3.0.0:

1. "CHOICE CTFC Size" statement lines are added, and they explicitly states that the number of bits used must be sufficient to cover all possibilities of CTFC. "x bits CTFC" statement in clause 8.3.1.14 is deleted.
2. "Gain factor information" IEs are renamed to "Power offset information" IEs.
3. Explicitly state that the method to indicate power offset is "Signalled Gain Factor".
4. "Reference TFC ID" IE was found to be missing in all instances of "Power offset information" IE. This error is corrected in this CR.
5. Since the need requirement of "Power offset information" IE is essential only when the transport channel of interest is either RACH or uplink DCH, occurrences of this IE in TFCS IE of other transport channel are marked as "Not Present".

Clauses affected: 8.3.1.14, Annex A

Other specs affected:

- Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☒ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

CR-XXX to TS 34.108

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these case. When the UTRAN receives this message, it is able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause "RB Control" when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active, with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and been allocated dedicated physical resources. Next SS send RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the UE sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel be released. However, this message does not contain information about the target cell to select when transiting to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to "RB Control" on the CCCH carried by PRACH physical channel, specified in cell 2's system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE "PRACH Info" and "Secondary CCPCH Info". To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on CCCH of cell 2. IE"Cell update cause" should be set to "RB Control". IE"DRX Indicator" set to "No DRX".
6		←	CELL UPDATE CONFIRM	IE"PRACH Info" and IE"Secondary CCPCH Info" are included in this message.
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to setup list	
- RAB information for setup	
- RAB Info	
- RAB Identity	4
- CN Domain Identity	PS
- RB Info to setup list	
- RB Info to setup	
- RB Identity	4
- PDCP Info	Not Present.
- RLC Info	Use the same RLC configuration as in TS 34.108.
- RB Mapping Info	Use the same RLC multiplexing scheme as in TS 34.108.
RB to be affected list	Not Present.

Information Element	Value/remark
UL Transport Channel information common to all transport channels	
- TFC Subset	Not Present – use default value, all TFCs are allowed. FDD
- CHOICE Mode	
- UL DCH TFCS	Normal
- CHOICE TFCI Signalling	
- TFCI Field 1 Information	Addition
- CHOICE TFCS representation	
- TFCS addition information	
- CHOICE CTFC Size	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10 of TS 34.108.</u>
- CTFC Information	Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel
~~- x bit CTFC~~	
~~- Gain factor~~ Power offset information	
- CHOICE Gain Factors	<u>Signalled Gain Factors</u>
- Gain factor β_c	0
- Gain factor β_d	0
- Reference TFC ID	<u>Not Present</u>
- Power offset Pp-m	0
Deleted TrCH information list (uplink)	<u>Not Present</u>
- Deleted UL TrCH information	
Added or Reconfigured TrCH information list	
- Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport Format Information	
- Number of Transport blocks	1
- CHOICE RLC mode	Octet Mode RLC size info type 1
- Octet mode RLC size info type 1	
- CHOICE Octet mode RLC size	Size type 1
- Size part 1	16
- Semi-static Transport Format	Use the same settings as in TS 34.108
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
DL Transport Channel information common to all transport channels	
Deleted TrCH information list (downlink)	
Added or Reconfigured TrCH information list	Not Present.
- Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	Same as the TFS used in the uplink specified in this message.
Frequency info	Not Present – use the existing frequency information
Maximum allow UL TX power	Not Present – use the allowable UL TX power as specified by the UE's RF power class.
CHOICE Channel requirement	Not Present.
Downlink information common for all radio links	Not Present.
Downlink information per radio link list	Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled “Packet to CELL_DCH from CELL_DCH in PS” found in Clause 8.1 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to release list	4
- RB Identity	
RB information to be affected list	
- RB information to be affected	DCCH for RRC (UM)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
- RB information to be affected	DCCH for RRC (AM)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
- RB information to be affected	DCCH for NAS_DT-AM High Priority
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
- RB information to be affected	DCCH for NAS_DT-AM Low Priority
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4

<u>Information Element</u>	<u>Value/remark</u>
<u>UL Transport Channel information common to all transport channels</u> - TFC Subset - CHOICE Mode - UL DCH TFCS <u>Deleted TrCH information list (uplink)</u> <u>Added or Reconfigured TrCH information list</u> - Added or Reconfigured UL TrCH information - Transport channel identity - TFS <u>DL Transport Channel information common to all transport channels</u> - SCCPCH TFCS - DL DCH TFCS <u>Deleted TrCH information list (downlink)</u> <u>Added or Reconfigured TrCH information list</u> - Added or Reconfigured DL TrCH information - Transport channel identity - TFS - DCH Target Quality - Transparent Mode Signalling Info <u>Frequency info</u> <u>Maximum allow UL TX power</u> <u>CHOICE Channel requirement</u> <u>Downlink information common for all radio links</u> <u>Downlink information per radio link list</u>	Not Present – use default value, all TFCs are allowed. FDD Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2. Not Present. 1 Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2. Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2. Not Present. Not Present. 1 Use the same TFS as in IE “FACH TFS” found in system information block type 5 messages of cell 2. Not Present Not Present Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class. Not Present. Not Present. Not Present.

CELL UPDATE (Step 5)

<u>Information Element</u>	<u>Value/remark</u>
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'RB Control' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Clause 8.1 of TS34.108.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE “Cell Update Cause” shall be set to “RB Control”.

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel broadcasted on the system information message in cell 2.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- TFCI combining indicator	Not Present
- Secondary CCPCH info	TRUE
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TFCI existence	FALSE
- Fixed or Flexible Position	TRUE
- Timing offset	Flexible
- TFCS	0
- Normal	(This IE is repeated for TFC number for PCH and FACH.)
- TFCI Field 1 information (Explicit TFCS Configuration)	
- Addition CHOICE TFCS representation	<u>Addition</u>
- TFCS addition information (Reconfiguration/Addition information)	
- CTFC information CHOICE CTFC Size	Number of bits used must be enough to cover all

- CTFC information	combinations of CTFC from clause 6.10.
- Gain factor β_c	0 to MaxTFCValue-1 (MaxTFCValue is referred to TS34.108 clause 6.10 Parameter Set.)
- Gain factor β_e	Not Present
- Gain factor β_d	0
- FACH/PCH information	0
- TFS	(PCH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	(FACH)
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Octet mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- References to system information blocks	Not Present
- Scheduling information	Not Present
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info	The value is for removal cell
- Primary scrambling code	None
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m}	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	

- Timing offset - TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_e - Gain factor β_d - Power offset P_{p-m}	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTEC information	Not Present

~~— TFC~~ ~~— Gain factor information~~ ~~— Gain factor β_c~~ ~~— Gain factor β_d~~ ~~— Power offset P_{p-m}~~ - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present Primary CPICH may be used Not Present
- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present

— CTFC — Gain factor information — Gain factor β_c — Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
~~Normal~~	
~~TFCI Field 1 information(Explicit TFCS Configuration)~~	
~~Addition~~	
~~TFCS addition information(Reconfiguration/Addition information)~~	
~~CTFC information~~	
~~CTFC~~	
~~Gain factor information~~	
~~Gain factor β_e~~	
~~Gain factor β_d~~	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
~~Normal~~	
~~TFCI Field 1 information(Explicit TFCS Configuration)~~	
~~Addition~~	
~~TFCS addition information(Reconfiguration/Addition information)~~	
~~CTFC information~~	
~~CTFC~~	
~~Gain factor information~~	
~~Gain factor β_e~~	
~~Gain factor β_d~~	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information (Explicit TFCS Configuration)	
- Addition CHOICE TFCS representation	<u>Addition</u>
- TFCS addition information	
(Reconfiguration/Addition information)	

- ~~CTFC information~~CHOICE CTFC Size - ~~CTFC information~~ - ~~Gain factor~~Power offset information - ~~CHOICE Gain Factors~~ - ~~Gain factor β_c~~ - ~~Gain factor β_d~~ - ~~Reference TFC ID~~ - ~~Power offset Pp-m~~ Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - ~~Normal~~ - ~~TFCI Field 1 information~~(Explicit TFCS Configuration) - ~~Addition~~ - ~~TFCS addition information~~(Reconfiguration/Addition information) - ~~CTFC information~~ - ~~CTFC~~ - ~~Gain factor information~~ - ~~Gain factor β_c~~ - ~~Gain factor β_d~~ - DL DCH TFCS - Normal - TFCI Field 1 information(~~Explicit TFCS Configuration~~) - ~~Addition~~CHOICE TFCS representation - ~~TFCS addition information~~(Reconfiguration/Addition information) - ~~CTFC information~~CHOICE CTFC Size - ~~CTFC information~~ - ~~Gain factor~~Power offset information - ~~Gain factor β_c~~ - ~~Gain factor β_d~~ - ~~Power offset Pp-m~~	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) Signalled Gain Factor 0 0 Not Present 0dB 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) Addition Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) Not Present 0 0 0dB

Added or Reconfigured DL TrCH information	2
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	0 (single)
- Downlink DPCH power control information	Reference to TS34.108 clause 6.10 Parameter Set
- DPC mode	Flexible
- Spreading factor	TRUE
- Fixed or Flexible Position	Not Present
- TFCI existence	0
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	1
- DPCH compressed mode info	inactive
-TGPS	FDD Measurement
-TGPS Status Flg	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	
- RPP	

- ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present Primary CPICH may be used Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration)	Addition
- Addition CHOICE TFCS representation - TFCS addition information (Reconfiguration/Addition information)	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information CHOICE CTFC Size - CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) Not Present
- Gain factor Power offset information - Gain factor P_c - Gain factor P_d - Power offset P_p-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition information (Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor P_c - Gain factor P_d	

- DL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition CHOICE CTFC Size - TFCS addition information (Reconfiguration/Addition information) - CTFC information CHOICE CTFC Size - CTFC information - Gain factor Power offset information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m}	(This IE is repeated for TFC number.) <u>Addition</u> Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.0 to $\text{MaxTFCValue} - 1$ (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 0dB 2
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible

- TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS —— Normal —— TFCI Field 1 information(Explicit TFCS Configuration) —— Addition —— TFCS addition information(Reconfiguration/Addition information) —— CTFC information —— CTFC —— Gain factor information —— Gain factor β_c —— Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration)	Addition
- ~~CHOICE TFCS representation~~ - TFCS addition information (Reconfiguration/Addition information)	
- ~~CTFC information~~ - ~~CHOICE CTFC Size~~	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. ~~0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)~~
- CTFC information	Signalled Gain Factor 0 0 Not Present 0dB
- ~~Gain factor~~Power offset information - CHOICE Gain Factors - Gain factor β_c - Gain factor β_d - Reference TFC ID - Power offset Pp-m	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information	Not Present

~~Gain factor β_c~~ ~~Gain factor β_d~~	
- DL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - ~~Addition CHOICE TFCS representation~~ - TFCS addition information (Reconfiguration/Addition information) - ~~CTFC information CHOICE CTFC Size~~ - CTFC information - ~~Gain factor Power offset~~ information ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~ Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 0dB 2
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(N_u) - UARFCN downlink(N_d)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor	0 (single) Reference to TS34.108 clause 6.10 Parameter Set

- Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS ~~Normal~~ ~~- TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~- Addition~~ ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~- CTFC information~~ ~~- CTFC~~ ~~- Gain factor information~~ ~~- Gain factor β_e~~ ~~- Gain factor β_d~~ - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS ~~- Normal~~ ~~- TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~- Addition~~ ~~- TFCS addition information(Reconfiguration/Addition information)~~ ~~- CTFC information~~ ~~- CTFC~~ ~~- Gain factor information~~ ~~- Gain factor β_c~~ ~~- Gain factor β_d~~ ~~- Power offset P_{p-m}~~	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - ~~Addition~~CHOICE TFCS representation - TFCS addition information (Reconfiguration/Addition information) - ~~CTFC information~~CHOICE CTFC Size - CTFC <u>information</u> - ~~Gain factor~~Power offset information ~~Gain factor β_c~~ ~~Gain factor β_d~~ - DL DCH TFCS ~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition~~ - information(Reconfiguration/Addition information) ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~ Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info	Not Present (This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to MaxTFCValue-1 (MaxTFCValue is r</u> Refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	4
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	33dBm
Maximum allowed UL TX power	
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8

- TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Primary CPICH may be used Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS ~~- Normal~~ ~~- TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~- Addition~~ ~~- TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~- CTFC information~~ ~~- CTFC~~ ~~- Gain factor information~~ ~~- Gain factor β_c~~ ~~- Gain factor β_d~~ ~~- Power offset P_{p-m}~~	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition CHOICE TFCS representation - TFCS addition information (Reconfiguration/Addition information) - CTFC information CHOICE CTFC Size - CTFC information - Gain factor - Power offset information - Gain factor β_c - Gain factor β_d DL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m} Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info	Not Present (This IE is repeated for TFC number.) Addition Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to $\text{MaxTFCValue} - 1$ (MaxTFCValue is r Refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	4
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	33dBm
Maximum allowed UL TX power	
PRACH info	
- Available Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8

- TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Primary CPICH may be used Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(TM DTCH)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information (Explicit TFCS Configuration)	
- Addition CHOICE TFCS representation	<u>Addition</u>
- TFCS addition information	
(Reconfiguration/Addition information)	
- CTFC information CHOICE CTFC Size	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor Power offset information	
- CHOICE Gain Factor	<u>Signalled Gain Factor</u>
- Gain factor β_c	0
- Gain factor β_d	0
- Reference TFC ID	<u>Not Present</u>
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
DRAC static information	
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
~~Normal~~	
~~TFCI Field 1 information(Explicit TFCS Configuration)~~	
~~Addition~~	
~~TFCS addition information(Reconfiguration/Addition information)~~	
~~CTFC information~~	
~~CTFC~~	
~~Gain factor information~~	
~~Gain factor β_c~~	
~~Gain factor β_d~~	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- ~~Addition~~ CHOICE TFCS representation	<u>Addition</u>
- TFCS addition information	
(Reconfiguration/Addition information)	
- ~~CTFC information~~ CHOICE CTFC Size	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- CTFC <u>information</u>	<u>0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.)</u>
- ~~Gain factor~~ Power offset information	<u>Signalled Gain Factor</u>
- <u>CHOICE Gain Factors</u>	0
- Gain factor β_c	0
- Gain factor β_d	Not Present
- Reference TFC ID	0dB
- Power offset Pp-m	Not Present
Deleted DL TrCH information	
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set

Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	100
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present

- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
- RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(DTCH TM)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	(DTCH TM)
RB information to be affected	5
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	3
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	3
- Transport channel identity	1
- Logical channel identity	
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

- MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present 1 DCH 4 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - ~~Addition~~CHOICE TFCS representation - TFCS addition information (Reconfiguration/Addition information) - ~~CTFC information~~CHOICE CTFC Size	<u>Addition</u>
- CTFC <u>information</u>	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~Refer to TS34.108 clause 6.10 Parameter Set.)
- ~~Gain factor~~Power offset information - CHOICE Gain Factors - Gain factor β_c - Gain factor β_d - Reference TFC ID - Power offset Pp-m	<u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB Not Present
Deleted UL TrCH information - Transport channel identity	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - ~~Addition~~ - ~~TFCS addition~~ - information(Reconfiguration/Addition information) - ~~CTFC information~~ - ~~CTFC~~ - ~~Gain factor information~~ - ~~Gain factor β_c~~ - ~~Gain factor β_d~~	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - ~~Addition~~CHOICE TFCS representation - TFCS addition information (Reconfiguration/Addition information) - ~~CTFC information~~CHOICE CTFC Size	(This IE is repeated for TFC number.)
- CTFC <u>information</u>	<u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~Refer to

- ~~Gain factor β_c~~ - ~~Gain factor β_e~~ - ~~Gain factor β_d~~ - ~~Power offset P_{p-m}~~	TS34.108 clause 6.10 Parameter Set- Not Present
Deleted DL TrCH information	0
- Transport channel identity	0
Added or Reconfigured DL TrCH information	0dB
- Transport channel identity	Not Present
- TFS	
- Dynamic Transport format information	1
- Number of Transport blocks	(This IE is repeated for TFI number)
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present Primary CPICH may be used Not Present
- TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding	Not Present

- Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information (Explicit TFCS Configuration)	
- Addition CHOICE TFCS representation	<u>Addition</u>
- TFCS addition information (Reconfiguration/Addition information)	
- CTFC information CHOICE CTFC Size	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor Power offset information	<u>Signalled Gain Factor</u>
- CHOICE Gain Factors	
- Gain factor β_c	0

- Gain factor β_d - <u>Reference TFC ID</u> - Power offset Pp-m	0 <u>Not Present</u> 0dB
Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information	
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
~~Normal~~ ~~TFCI Field 1 information (Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition information (Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	
- DL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - <u>Addition CHOICE TFCS representation</u> - TFCS addition information (Reconfiguration/Addition information) - <u>CTFC information CHOICE CTFC Size</u> - <u>CTFC information</u> - ~~Gain factor~~ <u>Power offset</u> information - <u>CHOICE Gain Factors</u> - Gain factor β_c - Gain factor β_d - <u>Reference TFC ID</u> - Power offset Pp-m	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue - 1 (MaxTFCValue is r~~ Refer to TS34.108 clause 6.10 Parameter Set.) <u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present

- Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination UL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition CHOICE TFCS representation - TFCS addition information (Reconfiguration/Addition information) - CTFC information CHOICE CTFC Size - CTFC information - Gain factor Power offset information - CHOICE Gain Factors - Gain factor β_c - Gain factor β_d - Reference TFC ID - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> 0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) <u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

Configuration)	
- Addition CHOICE TFCS representation	Addition
- TFCS addition information	
(Reconfiguration/Addition information)	
- CTFC information CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor Power offset information	Not Present
- Gain factor β_e	0
- Gain factor β_d	0
- Power offset P_{p-m}	0dB
Deleted DL TrCH information	
- Transport channel identity	3
Deleted DL TrCH information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity	FACH
- PDCP info	1
- RLC info	5
- Downlink RLC mode	(TM BCCH for RRC)
- In-sequence delivery	7
- RB mapping info	Not Present
- Information for each multiplexing option	TRUE
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	TRUE
- Downlink RLC mode	1
- In-sequence delivery	PCH
- RB mapping info	2
- Information for each multiplexing option	1
- Number of RLC logical channels	Not Present
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to be affected	
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
~~Normal~~	
~~TFI Field 1 information(Explicit TFCS Configuration)~~	
~~Addition~~	
~~TFCS addition~~	
~~information(Reconfiguration/Addition information)~~	
~~CTFC information~~	
~~CTFC~~	
~~Gain factor information~~	
~~Gain factor β_c~~	
~~Gain factor β_d~~	
~~Power offset P_{p-m}~~	
Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
~~CHOICE TFCS representation~~ - ~~TFCS addition information~~ (Reconfiguration/Addition information) - ~~CTFC information~~CHOICE CTFC Size	<u>Addition</u>
- ~~CTFC Information~~ - ~~Gain factor~~Power offset information - ~~Gain factor β_c~~ - ~~Gain factor β_d~~	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> <u>0 to MaxTFCValue-1 (MaxTFCValue is r</u> Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0
- DL DCH TFCS - ~~Normal~~ - ~~TFCI Field 1 information(Explicit TFCS Configuration)~~	Not Present
~~Addition~~ ~~TFCS addition information(Reconfiguration/Addition information)~~ - ~~CTFC information~~ - ~~CTFC~~ - ~~Gain factor information~~ - ~~Gain factor β_c~~ - ~~Gain factor β_d~~ - ~~Power offset P_{p-m}~~	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	

- Downlink DPCH Offset Value	1
- DPCH compressed mode info	inactive
-TGPSI	FDD Measurement
-TGPS Status Flg	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE

- Fixed or Flexible Position - Timing offset - TFCS ~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Flexible 0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE
RB information to reconfigure	1
- RB identity	FACH
- PDCP info	1
- RLC info	5
- Downlink RLC mode	(TM BCCH for RRC)
- In-sequence delivery	7
- RB mapping info	Not Present
- Information for each multiplexing option	TRUE
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to reconfigure	(TM PCCH for RRC)
- RB identity	8
- PDCP info	Not Present
- RLC info	TRUE
- Downlink RLC mode	1
- In-sequence delivery	PCH
- RB mapping info	2
- Information for each multiplexing option	1
- Number of RLC logical channels	Not Present
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RB information to be affected	
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
~~Normal~~	
~~TFCS Field 1 information(Explicit TFCS Configuration)~~	
~~Addition~~	
~~TFCS addition~~	
~~information(Reconfiguration/Addition information)~~	
~~CTFC information~~	
~~CTFC~~	
~~Gain factor information~~	
~~Gain factor β_c~~	
~~Gain factor β_d~~	
~~Power offset P_{p-m}~~	
Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
~~CHOICE TFCS representation~~ - ~~TFCS addition information~~ (Reconfiguration/Addition information) - ~~CTFC information~~CHOICE CTFC Size	<u>Addition</u>
- ~~CTFC Information~~ - ~~Gain factor~~Power offset information - ~~Gain factor β_c~~ - ~~Gain factor β_d~~	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> <u>0 to MaxTFCValue-1 (MaxTFCValue is r</u> Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0
- DL DCH TFCS - ~~Normal~~ - ~~TFCI Field 1 information(Explicit TFCS Configuration)~~	Not Present
~~Addition~~ ~~TFCS addition information(Reconfiguration/Addition information)~~ - ~~CTFC information~~ - ~~CTFC~~ - ~~Gain factor information~~ - ~~Gain factor β_c~~ - ~~Gain factor β_d~~ - ~~Power offset P_{p-m}~~	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	

- Downlink DPCH Offset Value	1
- DPCH compressed mode info	inactive
-TGPSI	FDD Measurement
-TGPS Status Flg	62
- TGMP	(Current CFN + (256 – TTI/10msec)) mod 256
- TGPRC	8
- TGCFN	10
- TGSN	5
- TGL1	15
- TGL2	35
- TGD	35
- TGPL1	Mode 1
- TGPL2	Mode 1
- RPP	DL
- ITPRM	F/2
- UL/DL Mode	F/2
- Downlink compressed mode method	
- Uplink compressed mode method	
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	150
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	
- TPC combination index	
- SSDT Cell Identity	
- Closed loop timing adjustment mode	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE

- Fixed or Flexible Position - Timing offset - TFCS ~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Flexible 0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - <u>CHOICE CTFC representation</u> - TFCs addition information (Reconfiguration/Addition information) - <u>CTFC information CHOICE CTFC Size</u> - <u>CTFC information</u> - <u>Gain factor</u> - <u>Power offset information</u> - <u>CHOICE Gain Factor</u> - Gain factor β_c - Gain factor β_d - <u>Reference TFC ID</u> - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> <u>0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)</u> <u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS	Not Present

Configuration) ~~Addition~~ ~~- TFCS addition~~ information(Reconfiguration/Addition information) ~~- CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) ~~Addition~~CHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) ~~CTFC information~~CHOICE CTFC Size - CTFC information ~~Gain factor~~Power offset information ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~ Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(N_u) - UARFCN downlink(N_d) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI	(This IE is repeated for TFC number.) Addition Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to $\text{MaxTFCValue} - 1$ (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) Not Present 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1

-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- Secondary CCPCH info	Not Present
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	
- Secondary scrambling code	
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	
- Spreading factor	
- Code number	
- Pilot symbol existence	
- TFCI existence	
- Fixed or Flexible Position	
- Timing offset	
- TECS	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information (Explicit TFCS Configuration)	
- ~~CHOICE CTFC representation~~	<u>Addition</u>
- TFC addition information (Reconfiguration/Addition information)	
- ~~CTFC information~~	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- ~~CHOICE CTFC Size~~	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- ~~CTFC information~~	
- ~~Gain factor~~	<u>Signalled Gain Factor</u>
- ~~Power offset information~~	0
- ~~CHOICE Gain Factor~~	0
- Gain factor β_c	<u>Not Present</u>
- Gain factor β_d	0dB
- Reference TFC ID	
- Power offset Pp-m	
Deleted UL TrCH Information	2
- Transport channel identity	
Deleted UL TrCH Information	3
- Transport channel identity	
Deleted UL TrCH Information	4
- Transport channel identity	
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
—— Normal	
—— TFCI Field 1 information (Explicit TFCS	

Configuration) ~~Addition~~ ~~- TFCs addition~~ information(Reconfiguration/Addition information) ~~- CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	
- DL DCH TFCs - Normal - TFCI Field 1 information (Explicit TFCs Configuration)	(This IE is repeated for TFC number.)
~~Addition~~ ~~- TFCs addition information~~ (Reconfiguration/Addition information) ~~- CTFC information~~ CHOICE CTFC representation CHOICE CTFC Size	Addition Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) Not Present
~~Gain factor~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset Pp-m~~ Deleted DL TrCH Information - Transport channel identity Deleted DL TrCH Information - Transport channel identity Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity	0 0 0dB 2 3 4 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - ~~CHOICE CTFC representation~~ - TFCs addition information - ~~CTFC information~~ - ~~CHOICE CTFC Size~~ - ~~CTFC information~~ - ~~Gain factor~~Power offset information - ~~CHOICE Gain Factors~~ - Gain factor β_c - Gain factor β_d - Reference TFC ID - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)~~ <u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - ~~Addition~~ - ~~TFCS addition~~ - ~~information (Reconfiguration/Addition information)~~ - ~~CTFC information~~	Not Present

~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	
- DL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - ~~CHOICE CTFC representation~~ - TFCS addition information (Reconfiguration/Addition information) - ~~CHOICE CTFC Size~~ - CTFC information - ~~Power offset information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~ Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 0dB 2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8

- TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present Primary CPICH may be used Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
	Not Present

~~TFCS addition~~ ~~information(Reconfiguration/Addtion information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_e~~ ~~Gain factor β_d~~ - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - <u>CHOICE CTFC representation</u> - TFC addition information - <u>CHOICE CTFC Size</u> - <u>CTFC information</u> - <u>Power offset</u> information - <u>CHOICE Gain Factors</u> - Gain factor β_c - Gain factor β_d - <u>Reference TFC ID</u> - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) <u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB Not Present
Deleted UL TrCH Information - Transport channel identity	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration)	Not Present

Configuration	
Addition	
TFCS addition	
information(Reconfiguration/Addition information)	
CTFC information	
CTFC	
Gain factor information	
Gain factor β_e	
Gain factor β_d	
DL DCH TFCS	(This IE is repeated for TFC number.)
Normal	
TFCI Field 1 information(Explicit TFCS Configuration)	
AdditionCHOICE CTFC representation	Addition
TFCS addition information	
(Reconfiguration/Addition information)	
CTFC informationCHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.)
Gain factor Power offset information	Not Present
Gain factor β_e	0
Gain factor β_d	0
Power offset Pp-m	0dB
Deleted DL TrCH Information	
Transport channel identity	2
Deleted DL TrCH Information	
Transport channel identity	3
Deleted DL TrCH Information	
Transport channel identity	4
Added or Reconfigured DL TrCH information	
Transport channel identity	1
TFS	
Dynamic Transport format information	(This IE is repeated for TFI number)
Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
Bit mode RLC size info	
Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
Semi-static Transport Format information	
Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DCH quality target	
BLER Quality value	0.00
Transparent mode signalling info	Not Present
Frequency info	
UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
Uplink DPCH power control info	
DPCCH power offset	-6dB
PC Preamble	8slot
Power Control Algorithm	Algorithm1
TPC step size	1dB
Scrambling code type	Long
Scrambling code number	0 (0 to 16777215)
Number of DPDCH	Not Present(1)
spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
TFCI existence	TRUE
Number of FBI bit	Not Present(0)
Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
Downlink DPCH info common for all RL	
Downlink DPCH power control information	
DPC mode	0 (single)
Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
Fixed or Flexible Position	N/A
TFCI existence	FALSE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCS Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(TM CCCH for RRC)
- RB identity	5
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	5
- MAC logical channel priority	1
RB information to be affected	(UM CCCH for RRC)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	5
RB information to be affected	(TM BCCH for RRC)
- RB identity	7
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	6
RB information to be affected	(TM PCCH for RRC)
- RB identity	8
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Downlink transport channel type	PCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
~~Normal~~	
~~TFCS Field 1 information(Explicit TFCS Configuration)~~	
~~Addition~~	
~~TFCS addition information(Reconfiguration/Addition information)~~	
~~CTFC information~~	
~~CTFC~~	
~~Gain factor information~~	
~~Gain factor β_c~~	
~~Gain factor β_d~~	
~~Power offset P_{p-m}~~	
Deleted UL TrCH Information	
- Transport channel identity	2
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) ~~CHOICE CTFC representation~~ ~~(Reconfiguration/Addition information)~~ - ~~CTFC information~~CHOICE CTFC Size - ~~CTFC information~~ - ~~Gain factor~~Power offset information - ~~Gain factor β_c~~ - ~~Gain factor β_d~~ ~~DL DCH TFCS~~ ~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~ Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 Not Present Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information	Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

_____ CTFG _____ Gain factor information _____ Gain factor β_c _____ Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	3 (AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 5
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 (TM CCCH for RRC)
RB information to be affected	5
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 1
RB information to be affected	(UM CCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 (TM BCCH for RRC)
RB information to be affected	7
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6 (TM PCCH for RRC)
RB information to be affected	8
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 PCH
RB information to be affected	2
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m}	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) ~~CHOICE CTFC representation~~ - ~~TFCS addition information~~ ~~(Reconfiguration/Addition information)~~ - ~~CTFC informationCHOICE CTFC Size~~ ~~CTFC information~~ - ~~Gain factorPower offset information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - ~~Addition~~ - ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ - ~~CTFC information~~ - ~~CTFC~~ - ~~Gain factor information~~ - ~~Gain factor β_c~~ - ~~Gain factor β_d~~ - ~~Power offset P_p-m~~ Deleted DL TrCH Information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power PRACH info - Available Signature - Signature - Signature	Not Present Not Present 4 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm 0 1

- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100

- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present Primary CPICH may be used Not Present 1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information (Explicit TFCS Configuration)	
- AdditionCHOICE CTFC representation	<u>Addition</u>
- TFCS addition information	
(Reconfiguration/Addition information)	
- CTFC informationCHOICE CTFC Size	<u>Number of bits used must be enough to cover all</u>

	combinations of CTFC from clause 6.10.

- <u>CTFC information</u>	0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set-)
- ~~Gain factor~~Power offset information	
- <u>CHOICE Gain Factors</u>	<u>Signalled Gain Factor</u>
- Gain factor β_c	0
- Gain factor β_d	0
- <u>Reference TFC ID</u>	<u>Not Present</u>
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- ~~Normal~~	
- ~~TFCI Field 1 information(Explicit TFCS Configuration)~~	
- ~~Addition~~	
- ~~TFCS addition information(Reconfiguration/Addition information)~~	
- ~~CTFC information~~	
- ~~CTFC~~	
- ~~Gain factor information~~	
- ~~Gain factor β_c~~	
- ~~Gain factor β_d~~	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- ~~TFCI Field 1 information(Explicit TFCS Configuration)~~	
- ~~Addition~~CHOICE CTFC representation	<u>Addition</u>
- ~~TFCS addition information (Reconfiguration/Addition information)~~	
- ~~CTFC information~~CHOICE CTFC Size	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- <u>CTFC information</u>	0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set-)
- ~~Gain factor~~Power offset information	<u>Not Present</u>
- ~~Gain factor β_c~~	0
- ~~Gain factor β_d~~	0
- ~~Power offset Pp-m~~	0dB
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	

- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1

- UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 Not Present 1 DCH 4 1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration)	
- <u>CHOICE CTFC representation</u> - TFC addition information	<u>Addition</u>
- <u>CTFC information</u> - <u>CHOICE CTFC Size</u> - <u>CTFC information</u>	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- <u>Gain factor</u> - <u>Power offset information</u>	<u>Signalled Gain Factor</u>
- <u>CHOICE Gain Factors</u> - Gain factor β_c - Gain factor β_d - <u>Reference TFC ID</u> - <u>Power offset Pp-m</u>	0 0 Not Present 0dB Not Present
Deleted UL TrCH information	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	

- Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00
Added or Reconfigured DL TrCH information	Not Present
- Transport channel identity - TFS	3
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00
- Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	4
- DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPST - TGPST Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE 4 bits 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS ~~- Normal~~ ~~- TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~- Addition~~ ~~- TFCS addition information(Reconfiguration/Addtion information)~~ ~~- CTFC information~~ ~~- CTFC~~ ~~- Gain factor information~~ ~~- Gain factor β_c~~ ~~- Gain factor β_d~~	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) <u>Addition</u> - CHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) - CTFC information <u>CHOICE CTFC Size</u> - CTFC information - Gain factor - Power offset information - CHOICE Gain Factors - Gain factor β_c - Gain factor β_d - Reference TFC ID - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) <u>Addition</u> - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) <u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	
- DL DCH TFCs - Normal - TFCI Field 1 information (Explicit TFCs Configuration) - Addition CHOICE CTFC representation - TFCs addition information (Reconfiguration/Addition information) - CTFC information CHOICE CTFC Size - CTFC information - Gain factor Power offset information ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to MaxTFCValue-1 (MaxTFCValue is r</u> <u>Refer to TS34.108 clause 6.10 Parameter Set.)</u> <u>Not Present</u> 0 0 0dB Not Present
Deleted DL TrCH information Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(N_u) - UARFCN downlink(N_d)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL	

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPST - TGPST Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS ~~- Normal~~ ~~- TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~- Addition~~ ~~- TFCS addition information(Reconfiguration/Addtion information)~~ ~~- CTFC information~~ ~~- CTFC~~ ~~- Gain factor information~~ ~~- Gain factor β_c~~ ~~- Gain factor β_d~~	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) <u>Addition</u> - CHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) - CTFC informationCHOICE CTFC Size - CTFC <u>information</u> - ~~Gain factor~~Power offset information - CHOICE Gain Factors - Gain factor β_c - Gain factor β_d - Reference TFC ID - Power offset Pp-m Deleted UL TrCH information Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) <u>Addition</u> - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~Refer to TS34.108 clause 6.10 Parameter Set.) <u>Signalled Gain Factor</u> 0 0 <u>Not Present</u> 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present

~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	
- DL DCH TFCs - Normal - TFCI Field 1 information (Explicit TFCs Configuration) - Addition CHOICE CTFC representation - TFCs addition information (Reconfiguration/Addition information) - CTFC information CHOICE CTFC Size - CTFC information - Gain factor Power offset information ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. 0 to MaxTFCValue-1 (MaxTFCValue is r</u> <u>Refer to TS34.108 clause 6.10 Parameter Set.)</u> <u>Not Present</u> 0 0 0dB Not Present
Deleted DL TrCH information Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(N_u) - UARFCN downlink(N_d)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL	

- Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS ~~- Normal~~ ~~- TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~- Addition~~ ~~- TFCS addition information(Reconfiguration/Addtion information)~~ ~~- CTFC information~~ ~~- CTFC~~ ~~- Gain factor information~~ ~~- Gain factor β_c~~ ~~- Gain factor β_d~~	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type Integrity check info Uplink integrity protection activation info Radio bearer uplink ciphering activation time info RB with PDCP information list - RB with PDCP information	Not checked. Not checked. Value should not be present unless otherwise stated. Not checked.

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5
Signalling RB information to setup	(TM RLC) TRUE
- RB identity - CHOICE RLC info type - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 5 1 (UM CCCH for RRC) 6
Signalling RB information to setup	(UM RLC)
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Max DAT retransmissions 4
Signalling RB information to setup	1 FACH 1 5 (TM BCCH for RRC) 7
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM RLC) TRUE
Signalling RB information to setup	1 FACH 1 6 (TM PCCH for RRC) 8
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM RLC) TRUE
UL Transport channel information for all transport channels	1 FACH 2 1
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
- UL DCH TFCS ~~Normal~~ ~~TFI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~	
Added or Reconfigured UL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- AdditionCHOICE CTFC representation - TFCS addition information	<u>Addition</u>
(Reconfiguration/Addition information)	
- CTFC informationCHOICE CTFC Size	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.)
- Gain factorPower offset information	<u>Not Present</u>
Gain factor β_c	0
Gain factor β_d	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m}	
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
PRACH info	33dBm
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number	0
	1
	2
	3
	4
	5
	6
	7
	Reference to TS34.108 clause 6.10 Parameter Set
	0

- Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present
~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- <u>CHOICE CTFC representation</u>	<u>Addition</u>
- TFC addition information	
(Reconfiguration/Addition information)	
- <u>CTFC informationCHOICE CTFC Size</u>	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- <u>CTFC information</u>	<u>0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)</u>
- <u>Gain factorPower offser information</u>	<u>Signalled Gain Factors</u>
- <u>CHOICE Gain Factors</u>	0
- Gain factor β_c	0
- Gain factor β_d	<u>Not Present</u>
- <u>Reference TFC ID</u>	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present

- Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS ~~Normal~~ ~~TFCS Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) ~~Addition~~CHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) - CTFC informationCHOICE CTFC Size - CTFC <u>information</u> - ~~Gain factor~~Power offset information ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~ Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(N_u) - UARFCN downlink(N_d) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info	(This IE is repeated for TFC number.) Addition <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> <u>0 to MaxTFCValue-1 (MaxTFCValue is r</u>Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 0dB 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single)

- Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_e - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- AdditionCHOICE CTFC representation	<u>Addition</u>
- TFCS addition information	
(Reconfiguration/Addition information)	
- CTFC informationCHOICE CTFC Size	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factorPower offset information	<u>Signalled Gain Factors</u>
- CHOICE Gain Factors	0
- Gain factor β_c	0
- Gain factor β_d	Not Present
- Reference TFC ID	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	

- Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS ~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information (~~Explicit TFCS Configuration~~) ~~Addition~~CHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) ~~CTFC information~~CHOICE CTFC Size - CTFC <u>information</u> - ~~Gain factor~~Power offset information ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~ Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> ~~0 to MaxTFCValue-1 (MaxTFCValue is r~~Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 0dB 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set

- Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS ~~Normal~~ ~~- TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information (Explicit TFCS Configuration)	
- <u>CHOICE CTFC representation</u>	<u>Addition</u>
- TFCs addition information	
(Reconfiguration/Addition information)	
- <u>CTFC information</u>	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- <u>CHOICE CTFC Size</u>	<u>0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)</u>
- <u>CTFC information</u>	<u>0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)</u>
- <u>Gain factor</u>	<u>Signalled Gain Factors</u>
- <u>Power offset information</u>	0
- <u>CHOICE Gain Factors</u>	0
- Gain factor β_c	
- Gain factor β_d	
- <u>Reference TFC ID</u>	<u>Not Present</u>
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present

- Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - AdditionCHOICE TFC representation - TFCS addition information (Reconfiguration/Addition information) - CTFC informationCHOICE CTFC Size - CTFC information - Gain factorPower offset information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m} Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size -Scrambling code type -Scrambling code number -Number of DPDCH -spreading factor -TFCI existence -Number of FBI bits -Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor	(This IE is repeated for TFC number.) Addition <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> <u>0 to MaxTFCValue-1 (MaxTFCValue is r</u> <u>Refer to TS34.108 clause 6.10 Parameter Set.)</u> <u>Not Present</u> 0 0 0dB 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set Not Present 0 (single) Reference to TS34.108 clause 6.10 Parameter Set

- Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor	Primary CPICH may be used Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS —— Normal —— TFCI Field 1 information(Explicit TFCS Configuration) —— Addition —— TFCS addition information(Reconfiguration/Addition information) —— CTFC information —— CTFC —— Gain factor information —— Gain factor β_c —— Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information (Explicit TFCS Configuration)	
- <u>CHOICE CTFC representation</u>	<u>Addition</u>
- TFC addition information	
(Reconfiguration/Addition information)	
- <u>CTFC information</u>	<u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u>
- <u>CHOICE CTFC Size</u>	<u>0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)</u>
- <u>CTFC information</u>	<u>0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)</u>
- <u>Gain factor</u>	<u>Signalled Gain Factors</u>
- <u>Power offset information</u>	0
- <u>CHOICE Gain Factors</u>	0
- Gain factor β_c	
- Gain factor β_d	
- <u>Reference TFC ID</u>	<u>Not Present</u>
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	

- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS ~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~ ~~Gain factor β_d~~ - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - ~~Addition~~CHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) - ~~CTFC information~~CHOICE CTFC Size - CTFC <u>information</u> - ~~Gain factor~~Power offset information ~~Gain factor β_c~~ ~~Gain factor β_d~~ ~~Power offset P_{p-m}~~ Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> <u>0 to MaxTFCValue-1 (MaxTFCValue is r</u>Refer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 0dB 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00
- UARFCN uplink(Nu)	Not Present
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	33dBm
-Uplink DPCH power control info	
-DPCCCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	No code change
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- TX Diversity mode	None
- SSDT information	Not Present
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
~~Normal~~	
~~TFCI Field 1 information(Explicit TFCS Configuration)~~	
~~Addition~~	
~~TFCS addition~~	
~~information(Reconfiguration/Addition information)~~	
~~CTFC information~~	
~~CTFC~~	
~~Gain factor information~~	
~~Gain factor β_c~~	
~~Gain factor β_d~~	
~~Power offset P_{p-m}~~	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition CHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) - CTFC information CHOICE CTFC Size - CTFC information - Gain factor Power offset information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information (Explicit TFCS Configuration) - Addition - TFCS addition information (Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m} Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) <u>Addition</u> 0 to MaxTFCValue-1 (MaxTFCValue is rRefer to TS34.108 clause 6.10 Parameter Set.) <u>Not Present</u> 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	100 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present Not Present
~~Normal~~ ~~TFCS Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~ ~~Gain factor β_c~~	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
~~Normal~~	
~~- TFCI Field 1 information(Explicit TFCS Configuration)~~	
~~- Addition~~	
~~- TFCS addition~~	
~~information(Reconfiguration/Addition information)~~	
~~- CTFC information~~	
~~- CTFC~~	
~~- Gain factor information~~	
~~- Gain factor β_c~~	
~~- Gain factor β_d~~	
~~- Power offset P_{p-m}~~	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - AdditionCHOICE CTFC representation - TFCS addition information (Reconfiguration/Addition information) - CTFC informationCHOICE CTFC Size - CTFC information - Gain factorPower offset information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding	(This IE is repeated for TFC number.) <u>Addition</u> <u>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</u> <u>0 to MaxTFCValue-1 (MaxTFCValue is r</u> Refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35

- TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	150 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS	Not Present Not Present
~~Normal~~ ~~TFCI Field 1 information(Explicit TFCS Configuration)~~ ~~Addition~~ ~~TFCS addition~~ ~~information(Reconfiguration/Addition information)~~ ~~CTFC information~~ ~~CTFC~~ ~~Gain factor information~~	Primary CPICH may be used Not Present
	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

Gain factor β_c	
Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00173**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 021

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

Matsushita Communication Industry Co.,Ltd

Date:

28/08/2000

Subject:

Addition of "DPCH frame offset" IE into "Downlink DPCH info for each RL" IE

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

In CR-385 for TS 25.331 V3.2.0, it was proposed that the offset between the beginning of P-CCPCH frame and the beginning of DPCH frame to be included into "Downlink DPCH info for each RL" IE. Accordingly, this CR highlights the resultant changes required for TS 34.123-1 V3.0.0. All offsets were set to 0 chips at this moment.

Clauses affected:

8.3.4.1, 8.3.4.3, 8.3.4.5, 8.3.4.6, Annex A

Other specs affected:

Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☒ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

CR-XXX to TS 34.108

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.3.4.1 Active set update in soft handover: Radio Link addition

8.3.4.1.1 Definition

8.3.4.1.2 Conformance requirement

Radio link addition is triggered in the network's RRC layer. The RRC entity in the network first configures the new radio link. Transmission and reception then begin immediately. This procedure is to update the active set of the connection between the UE and UTRAN. The UTRAN then transmits an ACTIVE SET UPDATE message to the UE. The UE configures layer 1 to begin reception for the additional radio link. After the UE receives confirmation from the physical layer in the UE, an ACTIVE SET UPDATE COMPLETE message is sent to the UTRAN.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.1.3 Test purpose

To confirm that the UE continues to communicate with the SS on both the additional radio link and an already existing radio link after the radio link addition.

8.3.4.1.4 Method of test

Initial Condition

System Simulator : 2cells - Cell 1 is active ,Cell 2 is active

UE : CELL_DCH in cell 1

Test Procedure

Initially, the UE establishes a radio access bearer in the CELL_DCH state in cell 1. The SS begins to configure the new radio link to be added from cell 2. Then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID). When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. After the UE confirms the synchronization with the new radio link from cell 2, the UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC. The UE continues to communicate with the SS on the both radio links. To test this condition, SS ceases the operations of all uplink and downlink DPCH from cell 1. SS shall observe that the data communication for both DCCH and DTCH channels continue as per normal using cell 2, as if cell 1 is still operational.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state in cell 1, after the successful establishment of a radio access bearer service.
2				The SS configures an additional radio link in the downlink direction from cell 2.
3		←	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE" Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1. SS ceases all Tx and Rx activities in cell 1. But it shall be able to communicate with UE through cell 2.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	<u>0 chips</u>
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- CHOICE Spreading factor	512
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	Not Present

8.3.4.1.5 Test requirement

After step 3 the UE shall configure a new radio link to cell.2, with the connection on the old radio link in cell 1 remaining operational and unaffected. It shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 4 the SS shall continue to communicate with the UE using the radio links added to the UE from cell 2.

8.3.4.3 Active set update in soft handover: Combined radio link addition and removal (active set is not full)

8.3.4.3.1 Definition

8.3.4.3.2 Conformance requirement

When radio links are to be replaced, the UTRAN RRC first configures the UTRAN L1 to activate the radio link(s) that are being added. The UTRAN RRC then transmits an ACTIVE SET UPDATE message to the UE RRC, which shall configure the UE L1 to terminate transmission and reception on the removed radio link(s) and begin transmission and reception on the added radio link(s). At the completion of the reconfiguration of radio links, the UE shall acknowledge the replacement with an ACTIVE SET UPDATE COMPLETE message.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.3.3 Test purpose

To confirm that the UE continues to communicate with the SS on the added radio link and removes radio link which exists prior to the execution of active set update procedure.

8.3.4.3.4 Method of test

Initial Condition

System Simulator : 2cells- Both Cell 1 and Cell 2 are active

UE :CELL_DCH in cell 1 [Active set is not full.]

Test Procedure

The UE establishes a radio access bearer in the CELL_DCH state in cell 1. SS begin to configure the new radio link in cell 2. Then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC. The message includes IE" Radio Link Addition Information". and IE" Radio Link Removal Information", indicating the removal of cell 1 and addition of cell 2 into the active set. When the UE receives this message, the UE RRC shall terminate the transmission and reception of the removed radio link in cell 1 and then configures layer 1 to begin transmission and reception in cell 2. After the UE received confirmations from the physical layer regarding the update of active set, it transmits an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH to the SS. The UE shall continue to communicate with the SS on the added radio link in cell 2. When SS receives ACTIVE SET UPDATE COMPLETE message, it verifies that the UE has ceased any uplink transmission in cell 1.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in cell 1
2				The SS configures an additional radio link in cell 2, starting the transmission and reception of data in cell 2. Clause
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE" Radio Link Addition Information" for cell 2 and IE" Radio Link Removal Information" for cell 1.
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link in cell 2 and removes the old radio link in cell 1.
5				The SS removes the radio link from cell 1 and the UE shall continue to communicate on the added radio link in cell 2, and not transmit any data in cell 1.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	
- Downlink DPCH info for each RL	P-CPICH can be used.
- Primary CPICH usage for channel estimation	<u>0 chips</u>
- DPCH frame offset	Not Present
- Secondary CPICH info	This IE is repeated for all existing downlink DPCHs allocated to the UE
- DL channelisation code	Not Present
- Secondary scrambling code	512
- CHOICE Spreading factor	For each DPCH, assign the same code number in the current code given in cell 2.
- Code Number	Not Present
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code assigned as for cell 1

8.3.4.3.5 Test requirement

After step 3 the UE shall remove the radio link in cell 1 and add the radio link in cell 2. Then the UE shall transmit an ACTIVE SET UPDATE COMPLETE message the uplink DCCH.

After step 4 the UE shall continue to communicate on the added radio link in cell 2. SS monitors the uplink direction to confirm that no data are designated for reception in cell 1.

8.3.4.5 Active set update in soft handover: Combined radio link addition and removal (active set is full)

8.3.4.5.1 Definition

8.3.4.5.2 Conformance requirement

When the UE active set is full, the UE shall first remove the old radio link and then add the new radio link, after it receives an ACTIVE SET UPDATE message for the combined radio link addition and removal.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.5.3 Test purpose

To confirm that the UE removes one of existing radio links, which is indicated in an ACTIVE SET UPDATE message and continues to communicate on the added radio link.

8.3.4.5.4 Method of test

Initial Condition

System Simulator : 3 cells - Cell 1 , Cell 2, and Cell 3 are all active

UE :CELL_DCH in cell 1, cell 2 (The assumed maximum number for active set is 2.)

[Editor's Note] The maximum number of radio link (i.e. MaxRL) specified in CR328 of TS 25.331 is 8. However, if the UE capability is more inferior in this aspect, can the assumption above still stands?

Test Procedure

The UE establishes a radio access bearer in the CELL_DCH state in cell 1 and cell 2. The SS configures the new radio link in cell 3 and sends an ACTIVE SET UPDATE message on DCCH using AM. This message includes IE" Radio Link Addition Information" indicating cell 3 to be added into the active set, and IE" Radio Link Removal Information" indicating the removal of cell 1 from the active set. When the UE receives this message, it shall not report a failure but firstly removes the indicated radio link and then adds the new radio link. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message on the DCCH using AM RLC to the SS and continues to communicate with the SS on the added radio link and the remaining old radio link.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state in cell 1 and cell 2.
2				The SS configures an additional radio link in for cell 3, and starts reception and transmission using cell 3.
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE" Radio Link Addition Information" and IE" Radio Link Removal Information". The contents of the IE dictate the addition of cell 3 into the active set and removal of cell 1 from it.
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link in cell 3 and removes the old radio link in cell 1.
5				The SS removes the radio link in cell 1. The UE shall continue to communicate on the added radio link in cell 3 and also the existing radio link in cell 2.

Specific Message Content

ACTIVE SET UPDATE

The message to be used in this test case is identical to the same message sub-type found in TS 34.108 Clause 8clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 3
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- CHOICE Spreading factor	512
- Code Number	For each DPCH, assign the same code number in the current code given in cell3.
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH Information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code assigned as for cell 1

8.3.4.5.5

Test requirement

After step 3 the UE shall remove the radio link in cell 1 and add the radio link in cell 3. Then the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 4 the UE shall continue to communicate on the added radio link in cell 3 and on the existing old radio link in cell 2. It shall cease all transmission to cell 1.

8.3.4.6 Active set update in soft handover: Incompatible simultaneous reconfiguration

8.3.4.6.1 Definition

8.3.4.6.2 Conformance Requirements

The UE shall keep its old configuration, when it receives an ACTIVE SET UPDATE message before it can complete an existing active set update procedure. The UE shall then transmit an RRC STATUS message on the DCCH using AM RLC with value “Message not compatible with receiver state” set in IE” Protocol error cause”. Then the UE shall continue to update its active set as if the second ACTIVE SET UPDATE message has not been received.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.6.3 Test Purpose

To confirm that the UE resumes the prior active set update request, when it receives a subsequent ACTIVE SET UPDATE before it has completely executed the first update procedure. To confirm that the UE transmits a RRC STATUS message to report the detection of “incompatible simultaneous reconfiguration” condition.

Method of test

Initial Condition

System Simulator : 2 cells – both cell 1 and cell 2 are active

UE : CELL_DCH in cell 1 and cell 2

8.3.4.6.4 Test Procedure

The UE establishes a radio access bearer in CELL_DCH state in cell 1 and cell 2. SS transmits an ACTIVE SET UPDATE message to request for the removal of cell 1 from the active list. When the UE sends an acknowledgement for this message from its RLC entity, SS immediately transmits a second ACTIVE SET UPDATE message, which specifies that cell 1 to be added into the active list. The UE shall react by transmitting RRC STATUS message on the DCCH using AM-RLC mode. In this message, the IE”Protocol error cause” shall be set to “Message not compatible with receiver state”. Subsequently, the UE shall transmit the ACTIVE SET UPDATE COMPLETE message when the reconfiguration from the earlier active set update is completed. When SS receives this message, it verifies that UE continues to communicate with the SS on the radio link in cell 2.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in both cell 1 and cell 2.
2		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC, requesting for cell 1 to be removed from the active set.
3		←	ACTIVE SET UPDATE	Immediately after UE acknowledges the message in step 2, SS transmits this message. This message specifies that cell 1 be added into the active set.
4		→	RRC STATUS	UE shall transmit this message with the IE "Protocol Error Cause" set to "Message not compatible with receiver state"
5		→	ACTIVE SET UPDATE COMPLETE	UE shall transmit this message to signal the completion of the active set update.
6				UE shall cease all communication with cell 1 and continue to communicate with cell 2 only.

Specific Message Contents

ACTIVE SET UPDATE (Step 2)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	Not Present.
Radio link removal information	
- Primary CPICH info	
- Primary scrambling code	Set to the P-CPICH scrambling code assigned to cell 1.

ACTIVE SET UPDATE (Step 3)

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 1
- Primary Scrambling Code	
- Downlink DPCH info for each RL	P-CPICH can be used.
- Primary CPICH usage for channel estimation	<u>0 chips</u>
- DPCH frame offset	Not Present
- Secondary CPICH info	This IE is repeated for all existing downlink DPCHs allocated to the UE
- DL channelisation code	Not Present
- Secondary scrambling code	512
- CHOICE Spreading Factor	For each DPCH, assign the same code number in the current code given in cell 1.
- Code Number	Not Present
- TPC Combination Index	Not Present
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- Secondary CCPCH Info	Not Present
- TFCS	Not Present
- FACH/PCH information	Not Present
- Reference to other system information blocks	Not Present
Radio link removal information	Not Present

RRC STATUS

Information Element	Value/remark
Protocol Error Cause	Check if it's set to 'Message not compatible with receiver state'

8.3.4.6.5 Test Requirement

After step 3 the UE shall report the “incompatible simultaneous reconfiguration” error by transmitting RRC STATUS message on the DCCH. In this message, the value “Message not compatible with receiver state” shall be set in IE”Protocol error cause”.

After step 4 the UE shall transmit ACTIVE SET UPDATE COMPLETE message on the uplink DCCH of cell 2.

After step 5 the UE shall continue to communicate normally with the SS using the radio link from cell 2.

Annex A. Default RRC Message Contents

This clause contains the default values of RRC messages, other than those specified in TS 34.108 clauses 6 and 9. Unless indicated otherwise in specific test cases, they shall be transmitted by the system simulator in RRC messages, and which are required to be received from the UE under test.

The necessary L3 messages are listed in alphabetic order, with the exception of the SYSTEM INFORMATION messages, where it is the information elements which are listed in alphabetic order (this is because some information elements occur in several SYSTEM INFORMATION types).

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Default SYSTEM INFORMATION:

NOTE 1: SYSTEM INFORMATION BLOCK TYPE 1 (except for PLMN type "GSM-MAP"), SYSTEM INFORMATION BLOCK TYPE 8, SYSTEM INFORMATION BLOCK TYPE 9, SYSTEM INFORMATION BLOCK TYPE 10, SYSTEM INFORMATION BLOCK TYPE 14, SYSTEM INFORMATION BLOCK TYPE 15 and SYSTEM INFORMATION BLOCK TYPE 16 messages are not used.

Contents of ACTIVE SET UPDATE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
Radio link addition information	(This IE is repeated for addition RL number.)
- Primary CPICH info	
- Primary scrambling code	The value is for additional cell
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	<u>0 chips</u>
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	
- Secondary scrambling code	
- Code number	1
- TPC combination index	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- SSDT Cell Identity	0
- Closed loop timing adjustment mode	-a
- TFCI combining indicator	Not Present
- Secondary CCPCH info	TRUE
- Primary CPICH usage for channel estimation	
- Secondary CPICH info	Primary CPICH may be used
- Secondary scrambling code	Not Present
- channelisation code	
- Secondary scrambling code	
- SSDT Indicator	1
- Spreading factor	FALSE
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- Pilot symbol existence	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- TFCI existence	FALSE
- Fixed or Flexible Position	TRUE
- Timing offset	Flexible
- TFCS	0
- Normal	(This IE is repeated for TFC number for PCH and FACH.)
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	(PCH) (This IE is repeated for TFI number.) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set (FACH) (This IE is repeated for TFI number.) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Radio link removal information	(This IE is repeated for removal RL number.)
- Primary CPICH info - Primary scrambling code	The value is for removal cell
TX Diversity Mode	None
SSDT information	Not Present

Contents of ACTIVE SET UPDATE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of ACTIVE SET UPDATE FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of CELL UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication(for c-plane)	Not checked
AM_RLC error indication(for u-plane)	Not checked
Cell update cause	See the test content
Protocol error indicator	Not checked
Measured results on RACH	Not checked
Protocol error information	Not checked

Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	0000 0000 0001B
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Maximum allowed UL TX power	33dBm
PRACH info	Not Present
- Available Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Signature	
- Available SF	
- Scrambling code number	
- Puncturing Limit	
- Available Sub Channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
- Sub channel number	
Downlink information common for one radio link	Not Present
- Primary CPICH info	

- Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - References to system information blocks - Scheduling information	

Contents of MEASUREMENT CONTROL message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Measurement Identity Number	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Event Trigger
Additional measurement list	
- CHOICE Measurement type	
- Intra-frequency measurement	
- Intra-frequency cell info	
- New intra-frequency cell	
- Intra-frequency cell-id	0
- cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	150
- Primary CPICH Tx power	Not Present
- Read SFN number	FALSE
- TX Diversity indicator	FALSE
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for monitored cells	
- SFN-SFN observed time difference	No report
- Cell Identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-CFN observed time difference	FALSE
- Reporting quantities for unlisted set cells	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Inter-system measurement	Not Present
- LCS measurement	Not Present
- Traffic Volume measurement	Not Present
- Quality measurement	Not Present
- UE internal measurement	Not Present

Contents of MEASUREMENT CONTROL FAILURE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	See the test content

Contents of MEASUREMENT REPORT message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Measurement identity number	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	0000 0000 0000 0000 0000 0000 0010B
- SFN-SFN observed time difference	Not checked
- Primary CPICH info	
- Primary scrambling code	150
- CPICH Ec/N0	Not checked
- CPICH RSCP	The presence should be checked
- Pathloss	Not checked
- CFN-SFN observed time difference	Not checked
CN domain identity	Not checked
NAS message	Not checked
Measured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (SMS in CS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE1 message: TM (SMS in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	SMS
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	Set to the same octed string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE2 message: AM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Paging cause	Terminating Speech Call
CN domain identity	CS domain
Paging Record Type identifier	Select the same type as in the IE "Initial UE Identity" in RRC CONNECTION REQUEST" message.

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
- TPGS status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	Primary CPICH may be used 0 chips Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
TGPS Status Flag	inactive

- TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	100 Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present Primary CPICH may be used
<u>- DPCH frame offset</u>	<u>0 chips</u>
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	100 Not Present
- DPCH frame offset	
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used 0 chips Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
information(Reconfiguration/Addtion information)	Not Present

- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
- TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \text{ mod } 256$
- TGSN	8
- TGL1	10
- TGL2	5

- TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	100 Not Present
- <u>DPCH frame offset</u>	
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present Primary CPICH may be used <u>0 chips</u> Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH power control info	Not Present
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	

- Spreading factor - Code number	Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of PHYSICAL CHANNEL RECONFIGURATION COMPLETE message: AM

Message Type	Not checked
Other information element	

Contents of RADIO BEARER SETUP message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	

- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Frequency info	0.00 Not Present
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPS - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	100 Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks	Not Present

- Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8

- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m} Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used 0 chips Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0 chips
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	Not Present
- RB identity	
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4

- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	6
- MAC logical channel priority	6
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1

- Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

DRAC static information	Not Present
- Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS	3
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info - Transport block size	Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	100 Not Present
- DPCH frame offset	0 chips
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(TM DTCH)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	Not Present
Deleted UL TrCH information	
- Transport channel identity	

Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted DL TrCH information - Transport channel identity Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info -Uplink DPCH power control info - DPCCH power offset	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB

- PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 100 Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present

- channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)

- RB identity	1
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	2
- Logical channel identity	2
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	2
- Logical channel identity	(AM DCCH for NAS_DT High priority)
RB information to be affected	2
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	3
- Logical channel identity	3
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	3
- Logical channel identity	(AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	1
- Transport channel identity	4
- Logical channel identity	4
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	1
- Transport channel identity	4
- Logical channel identity	(DTCH TM)
RB information to be affected	4
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	2
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	2
- Transport channel identity	1
- Logical channel identity	(DTCH TM)
RB information to be affected	5
- RB identity	
- RB mapping info	
- Information for each multiplexing option	1
- Number of RLC logical channels	DCH
- Uplink transport channel type	3
- Transport channel identity	1
- Logical channel identity	Not Present
- MAC logical channel priority	1
- Number of RLC logical channels	DCH
- Downlink transport channel type	3
- Transport channel identity	1
- Logical channel identity	
RB information to be affected	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1

Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	100 Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS	Not Present

- Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message: AM or UM (Packet to CELL_DCH from
CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	Not Present
- RB identity	
- PDCP info	
- PDCP info	
- RLC info	
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
-RB suspend/resume	
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1

- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RB information to be affected	(AM DTCH)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB

Deleted UL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Not Present
DRAC static information	
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	(This IE is repeated for TFI number)
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	

-DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	-6dB 8slot - Algorithm1 1dB - Long 0 (0 to 16777215) - Not Present(1) - SF is reference to TS34.108 clause 6.10 Parameter Set - TRUE - Not Present(0) - Reference to TS34.108 clause 6.10 Parameter Set - Not Present 0 (single) - Reference to TS34.108 clause 6.10 Parameter Set - Flexible - TRUE - Not Present 0 1 - inactive - FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 - Mode 1 - Mode 1 - DL - F/2 - F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info	- No code change - A 2.0 1.0 - None - Not Present - Not Present - Not Present 100 - Not Present - Not Present - Primary CPICH may be used 0 chips - Not Present

- Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM (Packet to CELL_DCH from
CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 2 2 1 DCH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Deleted UL TrCH information - Transport channel identity Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present (This IE is repeated for TFC number.)

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	
- Transport channel identity	3
Deleted DL TrCH information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	inactive FDD Measurement 62 $(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$ 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - <u>DPCH frame offset</u> - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Not Present
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 5 (TM BCCH for RRC)
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	7 Not Present TRUE
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC)
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	8 Not Present TRUE
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1 Not Present
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier	Not Present
- Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- DPCH frame offset	
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Flexible 0 Not Present Not Present Not Present

Contents of RADIO BEARER RECONFIGURATION message : AM or UM(Packet to CELL_FACH
from □CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to reconfigure	(UM DCCH for RRC)
- RB identity	0
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to reconfigure	(AM DCCH for RRC)
- RB identity	1
- PDCP info	Not Present
- RLC info	Not Present
- Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- MAX_DAT	
- Transmission window size	
- Timer_RST	
- Max_RST	
- Polling info	
- Timer_poll_prohibit	
- Timer_poll	
- Poll_SDU	
- Last transmission PU poll	
- Last retransmission PU poll	

- Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 2 3 1 FACH 1 2 (AM DCCH for NAS_DT High priority) 2 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll - Poll_Windows - Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PU indicator - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 3 4 1 FACH 1 3 (AM DCCH for NAS_DT Low priority) 3 Not Present Not Present
RB information to reconfigure - RB identity - PDCP info - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PU poll - Last retransmission PU poll	

- Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	TRUE 1 FACH 1 5 (TM BCCH for RRC)
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	7 Not Present TRUE
RB information to reconfigure - RB identity - PDCP info - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC)
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	8 Not Present TRUE
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 PCH 2 1 Not Present
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
Deleted UL TrCH information - Transport channel identity	Not Present
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addition information) - Addition - TFCS addition	
information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH information - Transport channel identity	Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	2
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present

- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	150
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE

- Fixed or Flexible Position	Flexible
- Timing offset	0
- TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	Not Present
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	Not Present
- Scheduling information	

Contents of RADIO BEARER RECONFIGURATION COMPLETE message: AM

Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present

information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Added or Reconfigured DL TrCH information	2
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
Frequency info	1
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	(This IE is repeated for TFI number)
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN	0.00
	Not Present
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	33dBm
	-6dB
	8slot
	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	inactive
	FDD Measurement
	62
	(Current CFN + (256 – TTI/10msec)) mod 256

- TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	Not Present Primary CPICH may be used 0 chips Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present

- Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH

- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
RB information to be affected	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Not Present
DRAC static information	Not Preaent
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class Identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	

information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	N/A
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH Offset Value	0
- DPCH compressed mode info	
-TGPSI	1

-TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	inactive FDD Measurement 62 $(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$ 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - <u>DPCH frame offset</u> - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB
Deleted UL TrCH Information - Transport channel identity	2 If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.). 1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addition information)	Not Present
- CTFC information - CTFC - Gain factor information	

- Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information)	(This IE is repeated for TFC number.)
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted DL TrCH Information	2
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.).
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
Uplink DPCH info	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Reference to TS34.108 clause 6.10 Parameter Set
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1	0 (single) Reference to TS34.108 clause 6.10 Parameter Set N/A FALSE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10

- TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	100 Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to release	
- RB identity	8
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2

- RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 3 3 1 DCH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 DCH 1 4 4 1 DCH 1 4
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 0dB Not Present
Deleted UL TrCH Information - Transport channel identity	1
Added or Reconfigured UL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID	Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	Not Present
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition	Not Present

- TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC	(This IE is repeated for TFC number.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
Deleted DL TrCH Information	0
- Transport channel identity	0dB
Deleted DL TrCH Information	2
- Transport channel identity	3
Deleted DL TrCH Information	4
- Transport channel identity	1
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number)
Frequency info	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB
Downlink information common for all radio links	8slot
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info	Algorithm1
	1dB
	Long
	0 (0 to 16777215)
	Not Present(1)
	SF is reference to TS34.108 clause 6.10 Parameter Set
	TRUE
	Not Present(0)
	Reference to TS34.108 clause 6.10 Parameter Set
	0 (single)
	Reference to TS34.108 clause 6.10 Parameter Set
	N/A
	FALSE
	Reference to TS34.108 clause 6.10 Parameter Set
	0

-TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- DPCH frame offset	Primary CPICH may be used
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	0 chips Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Timing offset	
- TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- FACH/PCH information	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- TFS	
- Dynamic Transport format information	
- Number of Transport blocks	
- Octet mode RLC size info	
- Transport block size	
- Semi-static Transport Format information	
- Transmission time interval	
- Type of channel coding	
- Coding Rate	
- Rate matching attribute	
- CRC size	
- References to system information blocks	
- Scheduling information	

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH 1 3 (AM DCCH for NAS_DT Low priority) 3
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 4 5 1 FACH 1 4 (TM CCCH for RRC) 5
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH 1 5 1 (UM CCCH for RRC) 6
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 5 (TM BCCH for RRC) 7
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 FACH 1 6 (TM PCCH for RRC) 8
RB information to be affected - RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 PCH 2 1
UL Transport channel information for all transport channels - TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH Information - Transport channel identity	2
Added or Reconfigured UL TrCH information - Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
CPCH set ID	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity - Time duration before retry - DRAC Class Identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition - TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information - CTFC	Not Present
- Gain factor information - Gain factor β_c - Gain factor β_d	Not Preaent
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	0
- Addition - TFCS addition	0
information(Reconfiguration/Addtion information)	Not Present
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Added or Reconfigured DL TrCH information	(This IE is repeated for TFI number)
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Not Present
	Not Present
	2
	(This IE is repeated for TFI number)
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set
	Reference to TS34.108 clause 6.10 Parameter Set

- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	Not Present
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15

- TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	100 Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	Not Present
- FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	
- References to system information blocks - Scheduling information	Not Present

Contents of RADIO BEARER RELEASE message: AM or UM (Packet to CELL_FACH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB information to release	
- RB identity	4
RB information to be affected	(UM DCCH for RRC)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
RB information to be affected	(AM DCCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
RB information to be affected	(AM DCCH for NAS_DT High priority)
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1

- Downlink transport channel type - Transport channel identity - Logical channel identity	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	3 (AM DCCH for NAS_DT Low priority)
RB information to be affected	3
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 5
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	4 (TM CCCH for RRC)
RB information to be affected	5
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 RACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 1
RB information to be affected	(UM CCCH for RRC)
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5 (TM BCCH for RRC)
RB information to be affected	7
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 FACH
RB information to be affected	1
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	6 (TM PCCH for RRC)
RB information to be affected	8
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1 PCH
RB information to be affected	2
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	1
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted UL TrCH Information	Not Present
- Transport channel identity	
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	1

- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Preaent
CPCH set ID DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class Identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addtion information) - Addition - TFCS addition - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Deleted DL TrCH Information - Transport channel identity	4
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info - Available Signature - Signature - Signature - Signature	0 1 2

- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present

- DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset	Not Present Not Present
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Primary CPICH may be used Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE

- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to

- Gain factor information	
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2

- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info	No code change A 2.0 1.0 None Not Present Not Present Not Present

Contents of RNTI REALLOCATION message: AM or UM

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	See the test content
- SRNC identity	
- S-RNTI	
New C-RNTI	See the test content
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

Contents of RNTI REALLOCATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information	Not checked

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Speech in CS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1

- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	6
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	(TM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	4

- Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 Not Present 1 DCH 4 1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	
UL Transport channel information for all transport channels	
- TFC subset - Allowed Transport Format combination	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) (This IE is repeated for TFC number.)
- UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Deleted UL TrCH information	Not Present
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity - TFS	3
- Dynamic Transport format information - Number of Transport blocks	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set

- Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity	Reference to TS34.108 clause 6.10 Parameter Set
- TFS	Reference to TS34.108 clause 6.10 Parameter Set
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transmission time interval	4
- Type of channel coding	(This IE is repeated for TFI number)
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission Time Validity	Reference to TS34.108 clause 6.10 Parameter Set
- Time duration before retry	Reference to TS34.108 clause 6.10 Parameter Set
- DRAC Class identity	Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	Reference to TS34.108 clause 6.10 Parameter Set
- SCCPCH TFCS	Reference to TS34.108 clause 6.10 Parameter Set
- Normal	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI Field 1 information(Explicit TFCS Configuration)	Reference to TS34.108 clause 6.10 Parameter Set
- Addition	Reference to TS34.108 clause 6.10 Parameter Set
- TFCS addition	Reference to TS34.108 clause 6.10 Parameter Set
information(Reconfiguration/Addtion information)	Reference to TS34.108 clause 6.10 Parameter Set
- CTFC information	Not Present
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor β_c	0
- Gain factor β_d	0
- Power offset Pp-m	0dB
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present

Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power Uplink DPCH info - Uplink DPCH power control info - DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit Downlink information common for all radio links - Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present (This IE is needed for 12.2 kbps and 10.2 kbps) 4 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 33dBm -6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set 0 (single) Reference to TS34.108 clause 6.10 Parameter Set Fixed FALSE

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.)
- information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB Not Present
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	Reference to TS34.108 clause 6.10 Parameter Set
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured DL TrCH information	0.00 Not Present
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	2
Frequency info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info - DPCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT message: UM (Packet to CELL_DCH from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
U-RNTI	Not Present
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200

- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- Logical channel identity	4
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	PS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	4
- PDCP info	Not Present
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	Not Present
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
RB information to release	Not Present
RB information to reconfigure	Not Present
RB information to be affected	Not Present
- RB identity	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	

- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
	0
- Gain factor information	0dB
- Gain factor β_c	Not Present
- Gain factor β_d	
- Power offset Pp-m	
Deleted DL TrCH information	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
- Uplink DPCH power control info	-6dB
- DPCCCH power offset	8slot
- PC Preamble	Algorithm1
- Power Control Algorithm	1dB
- TPC step size	Long
- Scrambling code type	0 (0 to 16777215)
- Scrambling code number	Not Present(1)
- Number of DPDCH	SF is reference to TS34.108 clause 6.10 Parameter Set
- spreading factor	TRUE
- TFCI existence	Not Present(0)
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE

- Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set Downlink PDSCH information CPCH SET info Downlink information for each radio links - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	No code change A 2.0 1.0 None Not Present Not Present Not Present 100 Not Present Not Present Not Present Primary CPICH may be used <u>0 chips</u> Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of RRC CONNECTION RE-ESTABLISHMENT COMPLETE message: AM

Information Element	Value
Message Type	
Integrity check info	Not checked.
Uplink integrity protection activation info	Not checked.
Radio bearer uplink ciphering activation time info	Value should not be present unless otherwise stated.
	Not checked.
RB with PDCP information list	
- RB with PDCP information	

Contents of RRC CONNECTION RE-ESTABLISHMENT REQUEST message: TM

Information Element	Semantics description
Message Type	
U-RNTI	Value is checked to see if it is equal to the previously assigned U-RNTI
Integrity check info	Not checked
AM_RLC error indication(for C-plane)	Not checked
AM_RLC error indication(for U-plane)	Not checked
Protocol error indicator	Value is checked to see if it is set to FALSE.
Measured results on RACH	Not checked.
Protocol error information	Should be absent as "Protocol error indicator" = FALSE

Contents of RRC CONNECTION REJECT message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Set to the UE's IMSI (GSM-MAP) or TMSI.
Rejection cause	Unspecified
Wait Time	0
Redirection info	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to TS34.108 clause 6.10 Parameter Set
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	0
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(UM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Downlink RLC mode	(UM RLC)
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

- RB identity	2
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- Uplink RLC mode	(AM RLC)
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PU poll	TRUE
- Last retransmission PU poll	TRUE
- Poll_Windows	100
- Downlink RLC mode	(AM RLC)
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4
Signalling RB information to setup	(TM CCCH for RRC)

- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Uplink transport channel type - Transport channel identity - Logical channel identity - MAC logical channel priority	5
Signalling RB information to setup	(TM RLC) TRUE
- RB identity - CHOICE RLC info type - RLC info - Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	1 RACH 1 5 1 (UM CCCH for RRC) 6
Signalling RB information to setup	(UM RLC)
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	Max DAT retransmissions 4
Signalling RB information to setup	1 FACH 1 5 (TM BCCH for RRC) 7
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM RLC) TRUE
Signalling RB information to setup	1 FACH 1 6 (TM PCCH for RRC) 8
- RB identity - CHOICE RLC info type - RLC info - Downlink RLC mode - In-sequence delivery - RB mapping info - Information for each multiplexing option - Number of RLC logical channels - Downlink transport channel type - Transport channel identity - Logical channel identity	(TM RLC) TRUE
UL Transport channel information for all transport channels	1 FACH 2 1
- TFC subset - Allowed Transport Format combination - UL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset P_{p-m}	
Added or Reconfigured UL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
DL Transport channel information common for all transport channel	
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d	0
	0
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
- Addition - TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	1
Frequency info	(This IE is repeated for TFI number)
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	Reference to TS34.108 clause 6.10 Parameter Set
PRACH info	Reference to TS34.108 clause 6.10 Parameter Set
- Available Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Signature - Available SF - Scrambling code number - Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
	0
	1
	2
	3
	4
	5
	6
	7
	Reference to TS34.108 clause 6.10 Parameter Set
	0
	Reference to TS34.108 clause 6.10 Parameter Set

- Available Sub Channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
-TGPSI	1
-TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITPRM	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	F/2
- Uplink compressed mode method	F/2
- Scrambling code change	
- Downlink frame type	
- DeltaSIR1	
- DeltaSIRafter1	
- TX Diversity mode	
- SSDT information	
- S field	
- Code Word Set	
Downlink information for each radio links	Not Present
- Primary CPICH info	
- Primary scrambling code	
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- PDSCH code mapping	
- DL Scrambling Code	
- Signalling Method	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	

- DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSST Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSST Indicator - Spreading factor - Code number - Pilot symbol existence - TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Scheduling information	Not Present

Contents of RRC STATUS message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked.
Protocol error information	
- Protocol error cause	Value will be checked.

Contents of SECURITY MODE FAILURE message : AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Failure cause	Value will be checked

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (The others of speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCO info	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	Not Present
- SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
- Addition - TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information	1
- Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set 0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCCH power offset - PC Preamble - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256)	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Not Present

- Downlink DPCH Offset Value - DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	100 Not Present Not Present Primary CPICH may be used 0 chips Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- TFCl existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCl Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Not Present
- information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	1
Added or Reconfigured DL TrCH information	
- Transport channel identity	
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	8slot
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Not Present
- DPCH frame offset	Primary CPICH may be used 0 chips
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	

DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
- Gain factor information	0
- Gain factor β_c	0dB
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	1
- Transport channel identity	
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	Reference to TS34.108 clause 6.10 Parameter Set
- Number of Transport blocks	
- Bit mode RLC size info	Reference to TS34.108 clause 6.10 Parameter Set
- Transport block size	
- Semi-static Transport Format information	Reference to TS34.108 clause 6.10 Parameter Set
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	0.00
- BLER Quality value	Not Present
- Transparent mode signalling info	
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info	
-DPCCH Power offset	-6dB
-PC Preamble	8slot
-Power Control Algorithm	Algorithm1
-TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bits	Not Present(0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- Downlink DPCH Offset Value	0

- DPCH compressed mode info - TGPSI - TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code	100
- PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0 chips
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number	Not Present
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode	1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a
- Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence	Not Present Not Present

- Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_DCH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	
- Gain factor information	0
- Gain factor β_c	0
- Gain factor β_d	0dB
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)

- Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present
DRAC static information - Transmission Time Validity - Time duration before retry - DRAC Class identity	
DL Transport channel information common for all transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	Not Present
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
- DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration)	(This IE is repeated for TFC number.)
information(Reconfiguration/Addtion information) - Addition - TFCS addition	
information(Reconfiguration/Addtion information) - CTFC information - CTFC	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m	0 0 0dB
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	1
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Added or Reconfigured DL TrCH information - Transport channel identity - TFS	2
- Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target - BLER Quality value - Transparent mode signalling info	

- DCH quality target - BLER Quality value - Transparent mode signalling info	0.00 Not Present
Frequency info	
- UARFCN uplink(Nu) - UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
Uplink DPCH info	
-Uplink DPCH power control info -DPCCH Power offset -PC Preamble -Power Control Algorithm -TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bits - Puncturing Limit	-6dB 8slot Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) SF is reference to TS34.108 clause 6.10 Parameter Set TRUE Not Present(0) Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	
- Downlink DPCH info common for all RL - Downlink DPCH power control information - DPC mode - Spreading factor - Fixed or Flexible Position - TFCI existence - Number of bits for Pilot bits(SF=128,256) - Downlink DPCH Offset Value - DPCH compressed mode info -TGPSI -TGPS Status Flg - TGMP - TGPRC - TGCFN - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	0 (single) Reference to TS34.108 clause 6.10 Parameter Set Flexible TRUE Reference to TS34.108 clause 6.10 Parameter Set 0 1 inactive FDD Measurement 62 (Current CFN + (256 – TTI/10msec)) mod 256 8 10 5 15 35 35 Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	No code change A 2.0 1.0 None Not Present
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier	100 Not Present

- TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition - information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present Primary CPICH may be used 0 chips Not Present 1 SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) 0 -a Not Present Not Present Not Present Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_DCH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS	
Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel - SCCPCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - DL DCH TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition information(Reconfiguration/Addtion information) - CTFC information - CTFC - Gain factor information - Gain factor β_c - Gain factor β_d - Power offset Pp-m Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value - Transparent mode signalling info Added or Reconfigured DL TrCH information - Transport channel identity - TFS - Dynamic Transport format information - Number of Transport blocks - Bit mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate	(This IE is repeated for TFC number.) 0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.) 0 0 Not Present 1 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 2 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present Not Present 3 (This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	100 Not Present
- DPCH frame offset	
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION message : AM or UM (Packet to CELL_FACH
from CELL_FACH in PS)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	Stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	0000 0000 0000 0010B
DRX indicator	noDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
RB with PDCP information	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- UL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addition information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
DRAC static information	Not Present
- Transmission Time Validity	
- Time duration before retry	
- DRAC Class identity	
DL Transport channel information common for all	

transport channel	(This IE is repeated for TFC number.)
- SCCPCH TFCS	
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	0 to MaxTFCValue-1 (MaxTFCValue is refer to TS34.108 clause 6.10 Parameter Set.)
- CTFC	0
	0
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- DL DCH TFCS	Not Present
- Normal	
- TFCI Field 1 information(Explicit TFCS Configuration)	
- Addition	
- TFCS addition	
information(Reconfiguration/Addtion information)	
- CTFC information	
- CTFC	
- Gain factor information	
- Gain factor β_c	
- Gain factor β_d	
- Power offset Pp-m	
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set

- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	4
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Bit mode RLC size info	
- Transport block size	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- BLER Quality value	
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to TS34.108 clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to TS34.108 clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
PRACH info	
- Available Signature	
- Signature	0
- Signature	1
- Signature	2
- Signature	3
- Signature	4
- Signature	5
- Signature	6
- Signature	7
- Available SF	Reference to TS34.108 clause 6.10 Parameter Set
- Scrambling code number	0
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
- Available Sub Channel number	
- Sub channel number	0
- Sub channel number	1
- Sub channel number	2
- Sub channel number	3
- Sub channel number	4
- Sub channel number	5
- Sub channel number	6
- Sub channel number	7
- Sub channel number	8
- Sub channel number	9
- Sub channel number	10
- Sub channel number	11
Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	
- Downlink DPCH power control information	
- DPC mode	
- Spreading factor	
- Fixed or Flexible Position	
- TFCI existence	
- Number of bits for Pilot bits(SF=128,256)	
- Downlink DPCH Offset Value	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flg	inactive
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35

- RPP - ITPRM - UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method	Mode 1 Mode 1 DL F/2 F/2
- Scrambling code change - Downlink frame type - DeltaSIR1 - DeltaSIRafter1 - TX Diversity mode - SSDT information - S field - Code Word Set	
Downlink PDSCH information	Not Present
CPCH SET info	Not Present
Downlink information for each radio links	
- Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - DSCH radio link identifier - TFCI Combining set - Radio link identifier - Primary CPICH info - Primary scrambling code - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation	150 Not Present
- DPCH frame offset	
- Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Code number - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number	Not Present Not Present
- Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - Normal - TFCI Field 1 information(Explicit TFCS Configuration) - Addition - TFCS addition	Primary CPICH may be used Not Present
information(Reconfiguration/Addtion information)	
- CTFC information - CTFC - Gain factor information	1 FALSE Reference to TS34.108 clause 6.10 Parameter Set SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set) FALSE TRUE Flexible 0 Not Present

- Gain factor β_c - Gain factor β_d - FACH/PCH information - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - Octet mode RLC size info - Transport block size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information	Not Present
	Not Present

Contents of TRANSPORT CHANNEL RECONFIGURATION COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Uplink integrity protection activation info	Not checked
Other information element	Not checked
Radio bearer uplink ciphering activation time info	Not checked
RB with PDCP information list	Not checked

Contents of TRANSPORT FORMAT COMBINATION CONTROL message : AM or UM (in CELL_DCH)

Information Element	Value/remark
Message Type	
Integrity check info	Not Present
- Message authentication code	
- RRC Message sequence number	
DPCH TFCS in Uplink	
- Allowed Transport format combination index	0 (The TFC is constructed from ALL TF0)

Contents of UE CAPABILITY ENQUIRY message : [TBD]

Information Element	Value/remark
Message Type	
Integrity check info	Not checked
Capability update requirement	
- UE radio access capability update requirement	TRUE
- System specific capability update requirement	UE only supports 1 system
list	
- System specific capability update requirement	GSM

Contents of UE CAPABILITY INFORMATION message : AM or UM

Information Element	Value/remark
Message Type Integrity check info UE radio access capability	Not checked Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings
- Conformance test compliance - PDCP Capability - RLC Capability - Transport channel capability - RF Capability - Physical channel capability - UE multi-mode/multi-RAT capability - Security Capability - LCS Capability - Measurement capability UE system specific capability	Value will be check. UE must include the classmark information for the supported system

Contents of UE CAPABILITY INFORMATION CONFIRM message : UM

Information Element	Value/remark
Message Type Integrity check info	Not checked

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not checked
AM_RLC error indication	Not checked
URA update cause	See the test content
Protocol error indicator	Not checked
Protocol error information	Not checked

Contents of URA UPDATE CONFIRM message: UM

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
- Integrity protection mode command	
- Downlink integrity protection activation info	
- RRC message sequence number	
- RRC message sequence number	
- Integrity protection algorithm	
- Integrity protection initialisation number	
Ciphering mode info	Not Present(If ciphering is applied, this IE is needed)
- Ciphering mode command	stop
- Ciphering algorithm	Not Present(Standard UMTS Encryption Algorithm UEA1)
- Activation time for DPCH	Not Present(Used RLC-TM)
- Radio bearer downlink ciphering activation time	Not Present(Used RLC-AM or RLC-UM)
info	
- Radio bearer identity	
- RLC sequence number	
New U-RNTI	Not Present
- SRNC identity	
- S-RNTI	
New C-RNTI	Not Present
DRX indicator	NoDRX
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
- PLMN identity	
- CN common GSM-MAP NAS system information	
- CN domain identity	
- CN domain specific GSM-MAP NAS system	
information	
URA identity	See the test content
RB with PDCP information	Not Present
- RB identity	
- PDCP SN info	

3GPP/TSG T1/SIG Meeting#12
Naantali, Finland, 28-30 August 2000

Document **T1S000174**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 022

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source: **Matsushita Communication Industry Co.,Ltd**

Date: **28/08/2000**

Subject: **Usage of Re-Establishment Timers**

Work item:

Category:

(only one category shall be marked with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

A concept for the usage of re-establishment timers (T314 and T315) was introduced in CR-285r1 for TS 25.331 V3.2.0. Originally, T314 was used for UM and TM RABs while T315 was used for AM RABs). The arrangement now is to attach one of the 2 timers to the RABs. This CR presents the affected clauses for TS 34.123-1 V3.0.0. Some text modifications were made to clarify the test requirement and test procedure.

Clauses affected: **8.1.4.9, 8.1.4.10, 8.3.1.14**

Other specs Affected:

- Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☐ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.1.4.9 RRC Connection Re-Establishment: Failure_(T314 is timeout and T315=0)

8.1.4.9.1 Definition

8.1.4.9.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. When the UE ~~shall~~ could not find a new cell ~~until before timer T314 is timeout expires~~, The the UE must shall enter to idle mode.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.9.3 Test purpose

To confirm that the UE enters ~~to~~ idle mode, after T314 ~~is~~ timeout following a radio link failure.

8.1.4.9.4 Method of test

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state- after a successful ~~outgoing call RRC connection establishment attempt~~. After the ~~call~~ DTCH has been established using radio bearer establishment procedure, the SS stops transmitting and receiving the DPCH and DPDCH on the radio link ~~except PCCPCH~~. ~~The UE should all detect a radio link failure. Until~~ Before T314 is timeout, the UE shall continue to find search for a new cell, and During this period, SS transmits a PAGING TYPE1 message on the PCCH to confirm that the UE is has not in entered the idle state, by This is confirmed when no response from UE is received before T314 is timeout. After T314 ~~is~~ timeout ~~then~~, the UE shall enter ~~to~~ idle mode. The SS transmits a PAGING TYPE1 message on the PCCH again to confirm that the UE is in idle state. ~~The UE shall respond by transmitting an RRC CONNECTION REQUEST message on the uplink CCCH.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T314=20 seconds
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state, after making a successful outgoing call.
4				The SS stops transmitting and receiving the DPCCCH and DPDCH on the radio link ~~except for the PCCPCH.~~
5		←	PAGING TYPE1	The SS transmits this message, which includes a matched identity (<u>set to the test-USIM IMSI</u>) before T314 is timeout.
6				The SS confirms that the UE does not transmit a response ~~for~~ in the next 20 seconds.
7		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (<u>set to the test-USIM IMSI</u>).
8		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause – must "Terminating Call" "Protocol Indicator" – must be FALSE
9		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	20 seconds
T315	0 seconds
N313	50

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is identical to the one found in Section 9 of TS 34.108 ~~those in default contents of layer 3 messages for RRC tests~~ with the following exceptions:

Information Element	Value/remark
<u>RAB information for setup</u>	
- RAB info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- RLC info	
- Downlink RLC mode	TM RLC
- In-sequence delivery	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- MAC logical channel priority	1
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1

PAGING TYPE 1 (Step 5 and 7)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified)
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card

RRC CONNECTION SETUP (Step 9)

Use the default message found in Section 9 of TS 34.108.

8.1.4.9.5 Test requirement

After step 5 the UE shall not transmits an RRC CONNECTION REQUEST message.

After step 9 the UE shall have an RRC connection based on dedicated physical channel resources.

8.1.4.10 RRC Connection Re-Establishment: Failure_(T315 is timeout and T314=0)

8.1.4.10.1 Definition

8.1.4.10.2 Conformance requirement

RRC connection re-establishment is needed, when a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. When the UE ~~shall~~ could not find a new cell ~~until before timer T315 is timeout expires~~, The UE ~~must~~ shall enter to idle mode-.

Reference

3GPP TS 25.331 clause 8.1.5

8.1.4.10.3 Test purpose

To confirm that the UE enters to idle mode, after T315 ~~is timeout expires~~ following a radio link failure.

Initial Condition

System Simulator : 1 cell

UE: CELL_DCH state

Test Procedure

The UE is brought to CELL_DCH state -after a successful RRC connection establishment~~outgoing call attempt~~. After the ~~call has been~~DTCH has been established using the radio bearer establishment procedure, the SS stops transmitting and receiving the DPCCH and DPDCH on the radio link ~~except PCCPCH~~. The UE should~~all~~ detect a radio link failure. ~~Until~~Before T315 is timeout, the UE shall continue to ~~find~~search for a new cell. During this period, and~~SS~~ transmits a PAGING TYPE1 message on the PCCH to confirm that the UE ~~has not~~has not entered the idle state. This is confirmed by~~when no response from the UE is received before T315 is timeout~~. After T315 is timeout, ~~then~~ the UE shall enter ~~to~~ idle mode. The SS transmits a PAGING TYPE1 message on the PCCH again to confirm that the UE is in idle state. ~~The UE shall respond by~~transmitting an RRC CONNECTION REQUEST message on the uplink CCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	T315=30 seconds
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is brought to CELL_DCH state, after making a successful outgoing call.
4				The SS stops transmitting and receiving the <u>DPCCH and DPDCH</u> on the radio link ~~except the PCCPCH~~ .
5		←	PAGING TYPE1	The SS transmits ~~this~~ message, which includes a matched identity (<u>set to the test-USIM IMSI</u>) before T315 ~~is~~ timeout.
6				The SS confirms that the UE does not transmit a response ~~for in the next~~ 30 seconds.
7		←	PAGING TYPE1	The SS transmits the message, which includes a matched identity (<u>set to the test-USIM IMSI</u>).
8		→	RRC CONNECTION REQUEST	SS checks the following IEs : "Initial UE identity" – must be the same as test-SIM IMSI. "Establishment Cause – must "Terminating Call" "Protocol Indicator" – must be FALSE
9		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish a RRC connection.

Specific Message Contents

SYSTEM INFORMATION TYPE 2

Information Element	Value/remark
UE Timers and constants in connected mode	
T301	3 seconds
T313	15 seconds
T314	0 seconds
T315	30 seconds
N313	50

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is identical to the one found in Section 9 of TS 34.108 ~~those in default contents of layer 3 messages for RRC tests~~ with the following exceptions:

Information Element	Value/remark
<u>RAB information for setup</u>	
- RAB info	
- RAB identity	<u>0000 0001B</u>
- CN domain identity	<u>CS domain</u>
- Re-establishment timer	
- T315	30 seconds
- RB information to setup	
- RB identity	<u>5</u>
- PDCP info	<u>Not Present</u>
- RLC info	
- Downlink RLC mode	<u>TM RLC</u>
- In-sequence delivery	<u>TRUE</u>
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	<u>1</u>
- Uplink transport channel type	<u>DCH</u>
- Transport channel identity	<u>2</u>
- Logical channel identity	<u>1</u>
- MAC logical channel priority	<u>1</u>
- Number of RLC logical channels	<u>1</u>
- Downlink transport channel type	<u>DCH</u>
- Transport channel identity	<u>2</u>
- Logical channel identity	<u>1</u>

PAGING TYPE 1 (Step 5 and 7)

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Paging originator	CN originator
- Paging cause	Terminating Call whose kind is supported service (speech,CS Data,PS data,SMS,Unspecified)
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the same octet string as in the IMSI stored in the USIM card

RRC CONNECTION SETUP (Step 9)

Use the default message found in Section 9 of TS 34.108.

8.1.4.10.5 Test requirement

After step 5 the UE shall not transmits an RRC CONNECTION REQUEST message.

After step 9 the UE shall have an RRC connection based on dedicated physical channel resources.

8.3.1.14 Cell Update: Radio Bearer Control for Transition from CELL_DCH to CELL_FACH

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

During a transition from CELL_DCH state to CELL_FACH state arising from the execution of radio bearer control procedure, the UE might be requested to re-select to an unknown cell. The UE shall select a cell and perform cell updating procedure. In order to distinguish the 2 cases of cell updating: (i) due to UE mobility and (ii) due to radio bearer control procedure, the update cause in CELL UPDATE message shall be different for these case. When the UTRAN receives this message, it is then able to decide whether to initiate RNC reallocation and the establishment of new configuration in the target RNC.

8.3.1.14.3 Test Purpose

To confirm that the UE perform a cell update procedure after being instructed to move from CELL_DCH to CELL_FACH state as a result of radio bearer control procedure. To confirm that the UE indicates cause “RB Control” when transmitting a CELL UPDATE message to the selected cell. To confirm that the UE transmit a compatible response to conclude the radio bearer control procedure.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active and suitable for camping, but with cell 1 having a stronger transmission power.

UE: CELL_DCH in cell 1

Test Procedure

The UE is brought to CELL_DCH state in cell 1, after the UE has successfully performed the RRC connection establishment procedure and ~~been~~ was allocated dedicated physical resources. Next SS send RADIO BEARER SETUP message to the UE on downlink DCCH. In this message, a DTCH channel is assigned to the UE. The UE shall reconfigure its channel resources and then return a RADIO BEARER SETUP COMPLETE message. Following this sequence, the UE sends RADIO BEARER RELEASE message to request that all radio bearers carried on dedicated physical channel to be released. However, this message does not contain information about the target cell to select when UE ~~transitions~~ to CELL_FACH state. The UE shall perform a cell reselection and it shall detect the presence of cell 2. The UE shall send a CELL UPDATE message with cause set to “RB Control” on the uplink CCCH carried by PRACH physical channel, specified in cell 2’s system information message. SS replies with CELL UPDATE CONFIRM message, specifying the IE “PRACH Info” and “Secondary CCPCH Info”. To complete this procedure, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH, which is carried on the PRACH specified in system information messages broadcasted in cell 2.

Expected Test Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after completing a successful RRC connection establishment procedure.
2		←	RADIO BEARER SETUP	Establishes DTCH logical channel.
3		→	RADIO BEARER SETUP COMPLETE	
4		←	RADIO BEARER RELEASE	Information on target cell is not specified.
5		→	CELL UPDATE	UE shall send this message on CCCH of cell 2. IE"Cell update cause" should be set to "RB Control". ~~IE"DRX Indicator" set to "No DRX".~~
6		←	CELL UPDATE CONFIRM	IE"PRACH Info" and IE"Secondary CCPCH Info" are included in this message. ~~IE"DRX Indicator" set to "No DRX".~~
7		→	RADIO BEARER RELEASE COMPLETE	Sent on the PRACH given in system information messages.

Specific Message Contents

RADIO BEARER SETUP (Step 2)

Use the same message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" found in Clause 8.49 of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to setup list - RAB information for setup - RAB Info - RAB Identity - CN Domain Identity - Re-establishment timer - T315	4 PS <u>1800 seconds</u>
- RB Info to setup list - RB Info to setup - RB Identity - PDCP Info - RLC Info - RB Mapping Info	4 Not Present. Use the same RLC configuration as in TS 34.108. Use the same RLC multiplexing scheme as in TS 34.108. Not Present.
RB to be affected list UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS addition information - CHOICE CTFC Size - CTFC Information	Not Present – use default value, all TFCs are allowed. FDD Normal Addition Refer to TS 34.108 – This IE is repeated for the maximum number TFC to be added as specified in TS 34.108 for a selected transport channel
- x bit CTFC - Gain factor information - Gain factor β_c - Gain factor β_d	
Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS - CHOICE Transport channel type - Dynamic Transport Format Information - Number of Transport blocks - CHOICE RLC mode - Octet mode RLC size info type 1 - CHOICE Octet mode RLC size - Size part 1 - Semi-static Transport Format - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size	2 Dedicated transport channels 1 Octet Mode RLC size info type 1 Size type 1 16 Use the same settings as in TS 34.108
DL Transport Channel information common to all transport channels Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS	Not Present. 2 Same as the TFS used in the uplink specified in this message.
Frequency info Maximum allow UL TX power	Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class.
CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present. Not Present. Not Present.

RADIO BEARER SETUP COMPLETE (Step 3)

Only the message type is checked for this message.

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type entitled “Packet to CELL_DCH from CELL_DCH in PS” found in Clause ~~98.4~~ of TS34.108, with the following exceptions:

Information Element	Value/remark
RAB information to release list	4
- RB Identity	
RB information to be affected list	
- RB information to be affected	DCCH for RRC (UM)
- RB identity	0
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	1
- MAC logical channel priority	2
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	1
- RB information to be affected	DCCH for RRC (AM)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	2
- MAC logical channel priority	3
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	2
- RB information to be affected	DCCH for NAS_DT-AM High Priority
- RB identity	2
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	3
- MAC logical channel priority	4
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	3
- RB information to be affected	DCCH for NAS_DT-AM Low Priority
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- Transport channel identity	1
- Logical channel identity	4
- MAC logical channel priority	5
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- Transport channel identity	1
- Logical channel identity	4

UL Transport Channel information common to all transport channels - TFC Subset - CHOICE Mode - UL DCH TFCS Deleted TrCH information list (uplink) Added or Reconfigured TrCH information list - Added or Reconfigured UL TrCH information - Transport channel identity - TFS DL Transport Channel information common to all transport channels - SCCPCH TFCS - DL DCH TFCS Deleted TrCH information list (downlink) Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Transport channel identity - TFS - DCH Target Quality - Transparent Mode Signalling Info Frequency info Maximum allow UL TX power CHOICE Channel requirement Downlink information common for all radio links Downlink information per radio link list	Not Present – use default value, all TFCs are allowed. FDD Use the same TFCS as in IE “RACH TFCS” found in system information block type 5 messages of cell 2. Not Present. 1 Use the same TFS as in IE “RACH TFS” found in system information block type 5 messages of cell 2. Use the same TFCS as in IE “TFCS” (for FACH) in IE “Secondary CCPCH system information” found in system information block type 5 messages of cell 2. Not Present. Not Present. 1 Use the same TFS as in IE “FACH TFS” found in system information block type 5 messages of cell 2. Not Present Not Present Not Present – use the existing frequency information Not Present – use the allowable UL TX power as specified by the UE's RF power class. Not Present. Not Present. Not Present.

CELL UPDATE (Step 5)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Integrity check info AM_RLC error indicator (for C-plane) AM_RLC error indicator (for U-plane) Cell Update Cause Protocol error indicator Measured results on RACH Protocol error information	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Not checked Check to see if set to 'FALSE' Check to see if set to 'FALSE' Check to see if set to 'RB Control' Check to see if it is absent or set to 'FALSE' Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Clause 8.49 of TS34.108.

RADIO BEARER RELEASE COMPLETE (Step 7)

Only the message type is checked in this message.

8.3.1.14.5 Test Requirement

After step 4 the UE shall reselect to cell 2, perform a cell update procedure by transmitting CELL UPDATE message. In this message, the IE “Cell Update Cause” shall be set to “RB Control”.

After step 6 the UE shall send RADIO BEARER RELEASE COMPLETE message on the DCCH carried by the PRACH channel. The applicable parameters of the PRACH resources are broadcasted on the system information messages ~~in~~ of cell 2.

3GPP/TSG T1/SIG Meeting #12
Naantali, Finland, 28-30 August 2000

Document **T1S00191**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 023

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

Matsushita Communication Industry Co.,Ltd and
ETSI

Date:

28/08/2000

Subject:

Correction to hard handover test cases

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☒
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☐
D Editorial modification ☐

Release:

Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

Hard handover test cases require more than 1 cell for execution. Existing hard handover test cases in TS 34.123-1 V3.0.0 are wrongly drafted as they employ only 1 cell. Also, hard handover can have 2 variants – (1) with change of UARFCN, (2) same UARFCN but with different scrambling or channelization codes. The hard handover type to be used by the SS has to be explicitly specified. This CR proposes to insert the necessary text descriptions to the affected clauses. Several editorial corrections are also made.

Clauses affected:

8.2.2.1, 8.2.4.1, 8.2.6.1

Other specs affected:

Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☐ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

Other

comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

8.2.2.1 Radio Bearer Reconfiguration_(Hard handover) from CELL_DCH to CELL_DCH: Success

8.2.2.1.1 Definition

8.2.2.1.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer ~~or~~ and L1 according to a the RADIO BEARER RECONFIGURATION- message, which specifies a hard handover to another radio frequency. After executing the reconfiguration, the UE shall be able to is-communicate with the UTRAN on the newly configured radio bearer.

Reference

3GPP TS 25.331 clause 8.2.2

8.2.2.1.3 Test purpose

To confirm that the UE ~~-reconfigures~~ a new radio bearer by following a RADIO -BEARER RECONFIGURATION message, ~~received from the SS, which indicates a hard handover to another radio frequency.~~

8.2.2.1.4 Method of test

Initial Condition

System Simulator : ~~1-2 cells – cell 1 and cell 46 are active. The CPICH Ec/No and CPICH RSCP of cell 4 are improved to –15dB and –70dBm respectively.~~The $Q_{rxlevmin}$ and $Q_{rxqualmin}$ values in SYSTEM INFORMATION BLOCK TYPE 3 and 4 messages of cell 6 is changed to –90dBm and –20dB respectively

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, ~~-which commands that hard handover to cell 46 be performed, includes the new transport channel parameter reconfigure.~~ The UE reconfigures the new ~~transport physical channel parameters~~ and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Hard handover to cell 46.
2				UE shall suspend all uplink transmissions to cell 1 and start to ~~Reconfigure~~ <u>Reconfigure</u> ~~ation of r~~ physical channel parameters to that of cell 46.
3		→	RADIO -BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to ~~those of the default contents of layer 3 messages for RRC tests~~ the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in Annex A, with the following exceptions:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	~~Selected value as the UE can support which is different from current frequency.~~ Same uplink UARFCN as used for cell 46 ~~Selected value as the UE can support which is different from current frequency.~~ Same downlink UARFCN as used for cell 46
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Same downlink UARFCN as used for cell 46 2350

8.2.2.1.5 Test requirement

After step1 the UE shall reconfigure the radio links with the SS.

After step3 the UE shall change its -physical channel configuration and communicate with the SS on the DCCH and DTCH of cell 46. ~~using the modified physical channel configurations~~

8.1.2.4.1 Transport channel reconfiguration from CELL_DCH to CELL_DCH (Hard handover to intra-same radio frequency): Success with no transport channel type switching

8.2.4.1.1 Definition

8.2.4.1.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer according to ~~a~~ the TRANSPORT CHANNEL RECONFIGURATION- message, which specifies a hard handover to another cell. After the completion of this procedure, the UE shall be able to ~~is~~ communicate with the UTRAN on the new transport channel.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.1.3 Test purpose

To confirm that the UE reconfigures a new transport channel according to a TRANSPORT CHANNEL RECONFIGURATION message, ~~received from the SS. which also specifies that a hard handover to another cell be performed simultaneously.~~

8.2.4.1.4 Method of test

Initial Condition

System Simulator : ~~1-2~~ cells – cell 1 and cell 2 are both active

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new transport channel parameters to be applied in cell 2. The UE shall reconfigures the new transport channel and then transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH of cell 2 using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONGURATION	Hard handover to cell 2. Including UE information elements("TFS")
2				<u>UE shall suspend all uplink transmissions and Reconfigure</u> <u>ation of itself to use the new</u> <u>transport channel parameters.</u>
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to ~~those of the default contents of layer 3 messages for RRC tests~~ the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in Annex A, with the following exceptions:

Information Element	Value/remark
TrCH Information Elements -Uplink transport Channels -Added or Reconfigured TrCH information list	Number of Transport blocks = 2
-Downlink transport Channels -Added or Reconfigured TrCH information list	~~Selected value as the UE can support.~~ Number of Transport blocks = 2
<u>Downlink information for each radio links</u> - Primary CPICH info	<u>Same downlink UARFCN as used for cell 2</u>
- Primary Scrambling Code	<u>150</u>

8.2.4.1.5 Test requirement

After step1 the UE shall reconfigure the radio links affected by the changes for uplink and downlink DCH. The UE shall stop transmitting on the uplink of cell 1.

After step3 the UE shall continue to communicate with the SS on the DCCH of cell 2, using the new Transport Format Set (TFS) applicable on the existing transport channel.

8.2.6.1 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency): Success

8.2.6.1.1 Definition

8.2.6.1.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to the PHYSICAL CHANNEL RECONFIGURATION- message received, which is used for hard handover purposes. It shall be able to communicate with the UTRAN on the new frequency subsequently.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.1.3 Test purpose

To confirm that the UE reconfigures ~~a new~~ the physical channel parameters according to a PHYSICAL CHANNEL RECONFIGURATION message received from the SS. After the reconfiguration, the UE shall resume normal transmission and reception operations.

Initial Condition

System Simulator : 1-2 cells – cell 1 and cell 46 are active. ~~The CPICH Ec/No and CPICH RSCP of cell 4 are improved to –15dB and –70dBm respectively. The $Q_{rxlevmin}$ and $Q_{rxqualmin}$ values in SYSTEM INFORMATION BLOCK TYPE 3 and 4 messages of cell 6 is changed to –90dBm and –20dB respectively~~

UE : CELL_DCH in cell 1

Test Procedure

The UE is in the CELL_DCH state in cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes a new physical channel parameter specified as the changing of the "Frequency Info" IE. The UE shall reconfigures itself and tune to the new physical channel and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH of cell 46 using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	Including a new frequency information.
2				UE shall suspend uplink activities to cell 1 and begin to reconfigure the physical channel parameters.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

~~None.~~ The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in Annex A, with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 46
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 46
Downlink information for each radio links	Same downlink UARFCN as used for cell 46
- Primary CPICH info	
- Primary Scrambling Code	2350

After step 32 the UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH of cell 46, and then continue to communicate with SS on the new physical channel.

3GPP TSG T WG1 #8
Naantali, Finland
31 August - 1 September 2000
3GPP TSG T1/SIG Meeting #12
Naantali, Finland, 28th – 30th August 2000

T1-000207

Document **T1S000128r2**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 026

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

NTTDoCoMo

Date:

29/08/2000

Subject:

Additons of new test cases and corrections; MM Authentication

Work item:

Category:

(only one category shall be marked with an X)

- F Correction ☒
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☐
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

- 1) Adding the authentication test using the authentication algorithm for 3G.
- 2) Correcting GSM wording to 3G wording.
- 3) Correcting editorial mistakes.
- 4) Correcting the document structure.

Clauses affected:

9.2, 9.2.1, 9.2.2, 9.2.3(new), 9.2.4(new)

Other specs

affected:

- Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☐ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

Other comments:

<Any other explanation you may see as useful>



help.doc

<----- double-click here for help and instructions on how to create a CR.

Specific message contents

None.

9.2 Authentication

The purpose of this procedure is to verify the user identity. A correct response is essential to guarantee the establishment of the connection. If not, the connection will drop.

The SS shall be able to handle vectors of AUTN, RAND, CK, IK, AUTS and XRES ~~Ke, RAND, and SRES~~ in a similar way as the MSC/BSS entities. The SS shall incorporate a test algorithm for generating RESSRES and CK, IK ~~Ke~~ from RAND, AUTN and IKK ~~Ke~~ which operates as described in annex 4.

9.2.1 Authentication accepted

9.2.1.1 Definition

9.2.1.1.21 Conformance requirement

- 1) A UE ~~User Equipment~~ shall correctly respond to an AUTHENTICATION REQUEST ~~Authentication Request~~ message by sending an AUTHENTICATION RESPONSE ~~Authentication Response~~ message with the RESSRES information field set to the same value as the one produced by the authentication algorithm in the network.
- 2) A UE ~~User Equipment~~ shall indicate in a PAGING RESPONSE ~~Paging Response~~ message the ciphering key sequence number which was allocated to it through the authentication procedure.

Reference(s)

TS 24.008 Clause 4.3.2a.

9.2.1.1.32 Test purpose

- 1) To check that a User Equipment ~~UE~~ correctly responds to an Authentication Request ~~AUTHENTICATION REQUEST~~ message by sending an Authentication Response ~~AUTHENTICATION RESPONSE~~ message with the SRES information field set to the same value as the one produced by the authentication algorithm in the network.
- 2) To check that a User Equipment ~~UE~~ indicates in a Paging Response ~~PAGING RESPONSE~~ message the ciphering key sequence number which was allocated to it through the authentication procedure.

9.2.1.1.43 Method of test

Initial conditions

- System Simulator:
 - 1 cell, default parameters.
- User Equipment:
 - the UE has valid TMSI, CKSN (CKSN1), Ke ~~CK, IK~~. It is "idle updated" on the cell.

Related ICS/IXIT statement(s)

None.

Foreseen final state of the UE

The UE has valid TMSI, CKSN and Ke ~~CK, IK~~. It is "idle updated" on the cell.

Test Procedure

The UE is paged. After the UE has sent a PAGING RESPONSE message to the SS, the SS initiates an authentication procedure and checks the value ~~RESSRES~~ sent by the UE in the AUTHENTICATION RESPONSE message. The RRC CONNECTION is released. The UE is paged and the SS checks the value of the ciphering key sequence number sent by the UE in the PAGING RESPONSE message.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		Mobile terminated establishment of Radio Resource Connection ~~MOBILE TERMINATED ESTABLISHMENT OF RRC CONNECTION~~	See TS 34.108 clause 7.1.2 Establishment Cause: Answer to paging. ~~Establishment Cause: Answer to paging.~~
2	→		PAGING RESPONSE	CKSN = CKSN1
3	←		AUTHENTICATION REQUEST	The SS initiates authentication with CKSN2 different from CKSN1.
4	→		AUTHENTICATION RESPONSE	"Auth. parameter ~~SRESRES~~ " IE shall be bit exact with the value as produced by the authentication algorithm.
5	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link. The SS waits an amount of time which is enough to guarantee that the UE is in service.
6	←		Mobile terminated establishment of Radio Resource Connection ~~MOBILE TERMINATED ESTABLISHMENT OF RRC CONNECTION~~	See TS 34.108 clause 7.1.2 Establishment Cause: Answer to paging. ~~Establishment Cause: Answer to paging.~~
7	→		PAGING RESPONSE	"Ciphering key sequence number" shall be the same as the value that was sent in the last AUTHENTICATION REQUEST message (= CKSN2).
8	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.

Specific message contents

None.

9.2.1.5 Test requirement

FFS

9.2.2 Authentication rejected by the network

9.2.2.1 Definition

9.2.2.1 Conformance requirement

1) After reception of an Authentication Reject message the ~~User Equipment~~ UE shall:

- 1.1 not perform normal location updating;
- 1.2 not perform periodic location updating;
- 1.3 not respond to paging with TMSI;

1.4 reject any request from CM entity for MM connection except for emergency call;

1.5 not perform IMSI detach if deactivated.

2) After reception of an Authentication Reject message the ~~User Equipment~~UE, if it supports speech, shall accept a request for an emergency call by sending a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call" and include an IMEI as mobile identity in the CM SERVICE REQUEST message.

3) After reception of an Authentication Reject message the ~~User Equipment~~UE shall delete the stored LAI, CKSN and TMSI.

Reference(s)

TS 24.008 Clause 4.3.2.5.

9.2.2.32 Test purpose

1) To check that ,after reception of an Authentication Reject message, the ~~User Equipment~~UE:

1.1 does not perform normal location updating;

1.2 does not perform periodic location updating;

1.3 does not respond to paging with TMSI;

1.4 rejects any request from CM entity for MM connection except for emergency call;

1.5 does not perform IMSI detach if deactivated.

2) To check that, after reception of an Authentication Reject message the ~~User Equipment~~UE, if it supports speech, accepts a request for an emergency call by sending a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call" and includes an IMEI as mobile identity in the CM SERVICE REQUEST message.

3) To check that, after reception of an Authentication Reject message and after having been deactivated and reactivated, the UE performs location updating using its IMSI as mobile identity and indicates deleted LAI and CKSN.

9.2.2.43 Method of test

Initial conditions

- System Simulator:
 - two cells: A and B, belonging to different location areas a and b;
 - IMSI attach/detach is allowed in both cells;
 - the T3212 time-out value is 1/10 hour in both cells.
- User Equipment:
 - the UE has valid TMSI, CKSN (CKSN2), ~~CK and IK~~and Ke. It is "idle updated" on cell B.

Related ICS/IXIT statement(s)

~~SIM~~ ~~USIM~~ removal possible while UE is powered Yes/No.

Switch off on button Yes/No.

Support of speech Yes/No.

Foreseen final state of the UE

The UE has valid TMSI, CKSN (CKSN1), CK and IK and ~~Ke~~. It is "idle updated" on cell A.

Test procedure

The SS rejects an authentication. The RRC CONNECTION is released. The SS checks that the UE has entered the state MM IDLE substate NO IMSI, i.e. does not perform normal location updating, does not perform periodic updating, does not respond to paging, rejects any requests from CM entities except emergency calls and does not perform IMSI detach if SIM-USIM detachment is performed, switch off is performed, or the power is removed, depending on the UE (see ICS/IXIT).

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
The following messages are sent and shall be received on cell B				
1	←		<u>Mobile terminated establishment of Radio Resouorce Connection</u> ~~MOBILE TERMINATED ESTABLISHMENT OF RRC CONNECTION~~	<u>See TS 34.108 clause 7.1.2</u> <u>Establishment Cause: Answer to paging.</u>
	→			~~Establishment Cause: Answer to paging.~~
2	→		PAGING RESPONSE	"Ciphering key sequence number" shall be the same as the value that was sent in the last AUTHENTICATION REQUEST message (= CKSN2).
3	←		AUTHENTICATION REQUEST	
4	→		AUTHENTICATION RESPONSE	
5	←		AUTHENTICATION REJECT	
6	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
9	←		<u>Mobile terminated establishment of Radio Resouorce Connection</u> ~~MOBILE TERMINATED ESTABLISHMENT OF RRC CONNECTION~~	<u>See TS 34.108 clause 7.1.2</u> The UE is paged in cell B. "Mobile identity" IE contains TMSI.
10	UE			The UE shall ignore this message. This is verified during 3 seconds.
11	SS			The SS waits for at least for 15 s.
12	UE			A MO CM connection is attempted.
13	UE			The UE shall not initiate an RRC connection establishment on cell A or cell B. This is checked during 3 seconds.
14	UE			If the UE supports speech (see ICS), an emergency call is attempted.
<u>15</u>	→		<u>RRC CONNECTION REQUEST</u>	"Establishment cause": Emergency call.
<u>16</u>	←		<u>RRC CONNECTION SETUP</u>	
<u>17</u>	→		<u>RRC CONNECTION COMLETE</u>	
~~18~~	→		CM SERVICE REQUEST	"CM service type": Emergency call establishment. "Mobile identity": type of identity is set to IMEI.
~~19~~	←		CM SERVICE ACCEPT	
~~20~~	→		EMERGENCY SETUP	
~~21~~	←		RELEASE COMPLETE	"Cause" = unassigned number.
~~22~~	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
The following messages are sent and shall be received on cell A.				
~~23~~	SS			The RF levels are changed to make the UE reselect the cell A.
~~24~~	UE			The UE performs cell reselection according to procedure as specified in (this however is not checked until step 29). The UE shall not initiate an RRC connection establishment on cell A or on cell B.
~~25~~	SS			The SS waits at least 7 minutes for a possible periodic updating.
~~26~~	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B.
~~27~~	UE			If possible (see ICS) ~~SIM-USIM~~ detachment is performed. Otherwise if possible (see ICS) switch off is performed. Otherwise the power is removed.
~~28~~	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B. This is checked during 3 seconds.
~~29~~	UE			Depending on what has been performed in step 26 the UE is brought back to operation.
~~30~~	→		RRC CONNECTION REQUEST	"Establishment cause": Location updating.
~~31~~	←		RRC CONNECTION SETUP	
~~32~~	→		RRC CONNECTION COMLETE	

<u>2933</u>	→	LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = no key available, "Mobile Identity" = IMSI, "LAI" = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE).
<u>3034</u>	←	AUTHENTICATION REQUEST	"CKSN" = CKSN1.
<u>3135</u>	→	AUTHENTICATION RESPONSE	
<u>3236</u>	←	LOCATION UPDATING ACCEPT	"Mobile Identity" = TMSI.
<u>3337</u>	→	TMSI REALLOCATION COMPLETE	
<u>3438</u>	←	RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.

Specific message contents

None.

9.2.2.5 Test requirement

FFS

9.2.3 Authentication rejected by the UE (MAC code failure)

9.2.3.1 Definition

Following a UMTS authentication challenge, the MS may reject the core network, on the grounds of an incorrect AUTN parameter (see TS 33.102).

If the MS considers the MAC code (supplied by the core network in the AUTN parameter) to be invalid, it shall send a AUTHENTICATION FAILURE message to the network, with the failure cause 'MAC failure' (see 33.102).

9.2.3.2 Conformance requirement

A UE shall correctly respond to an AUTHENTICATION REQUEST message with the failure cause 'MAC failure' by sending an AUTHENTICATION FAILURE message.

Reference(s)

TS 24.008 Clause 4.3.2.5.1, 4.3.2.6

9.2.3.3 Test purpose

To check that a UE shall correctly respond to an AUTHENTICATION REQUEST message with the failure cause 'MAC failure' by sending an AUTHENTICATION FAILURE message.

9.2.3.4 Method of test

Initial conditions

- System Simulator:
 - 1 cell, default parameters.
- User Equipment:
 - the UE has valid TMSI, CKSN (CKSN1), CK, IK. It is "idle updated" on the cell.

Related ICS/IXIT statement(s)

None.

Test procedure

The UE rejects an authentication. The AUTHENTICATION FAILURE is sent by UE. Upon receipt of the AUTHENTICATION FAILURE message, the network stops the timer T3260. In MAC failure case, the procedural behaviour is ffs.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			Mobile terminated establishment of Radio Resource Connection	See TS 34.108 clause 7.1.2
<u>2</u>	→		PAGING RESPONSE	CKSN = CKSN1
<u>3</u>	←		AUTHENTICATION REQUEST	with the failure cause 'MAC code failure'
<u>4</u>	→		AUTHENTICATION FAILURE	with reject cause "MAC failure"
<u>5</u>	←		IDENTITY REQUEST	
<u>6</u>	→		IDENTITY RESPONSE(IMS)	
<u>7</u>	←		AUTHENTICATION REQUEST	with the failure cause 'MAC code failure'
<u>8</u>	→		AUTHENTICATION FAILURE	with reject cause "MAC failure"

Specific message contents

None.

9.2.3.5 Test requirement

FFS

9.2.4 Authentication rejected by the UE (SQN failure)9.2.4.1 Definition

Following a UMTS authentication challenge, the MS may reject the core network, on the grounds of an incorrect AUTN parameter (see TS 33.102).

If the MS considers the SQN (supplied by the core network in the AUTN parameter) to be out of range, it shall send a AUTHENTICATION FAILURE message to the network, with the failure cause 'Synch failure' and parameter(AUTS) provided by the USIM (see TS 33.102)

9.2.4.2 Conformance requirement

A UE shall correctly respond to an AUTHENTICATION REQUEST message with the failure cause 'Synch failure' and parameter(AUTS) provided by the USIM (see TS 33.102) by sending an AUTHENTICATION FAILURE message.

Reference(s)

TS 24.008 Clause 4.3.2.5.1, 4.3.2.6

9.2.4.3 Test purpose

To check that a UE shall correctly respond to an AUTHENTICATION REQUEST message with the failure cause 'Synch failure' and parameter(AUTS) provided by the USIM (see TS 33.102) by sending an AUTHENTICATION FAILURE message.

9.2.4.4 Method of testInitial conditions

- System Simulator:

- 1 cell, default parameters.
- User Equipment:
 - the UE has valid TMSI, CKSN (CKSN1), CK, IK. It is "idle updated" on the cell.

Related ICS/IXIT statement(s)

None.

Test procedure

The UE rejects an authentication. The AUTHENTICATION FAILURE is sended by UE.

Upon receipt of the AUTHENTICATION FAILURE message, the network stops the timer T3260. In Synch failure case, the core network may renegotiate with the HLR/AuC and provide the MS with new authentication parameters.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>Mobile terminated establishment of Radio Resouorce Connection</u>	<u>See TS 34.108 clause 7.1.2</u>
<u>2</u>	<u>→</u>		<u>PAGING RESPONSE</u>	<u>CKSN = CKSN1</u>
<u>3</u>	<u>←</u>		<u>AUTHENTICATION REQUEST</u>	<u>with the failure cause 'Synch failure'</u>
<u>4</u>	<u>→</u>		<u>AUTHENTICATION FAILURE</u>	<u>"Auth. parameter RES" IE shall be bit exact with the value as produced by the authentication algorithm.</u>
<u>5</u>	<u>←</u>		<u>AUTHENTICATION REQUEST</u>	<u>with the failure cause 'Synch failure'</u>
<u>6</u>	<u>→</u>		<u>AUTHENTICATION FAILURE</u>	<u>"Auth. parameter RES" IE shall be bit exact with the value as produced by the authentication algorithm.</u>

Specific message contents

None.

9.2.3.5 Test requirement

FFS

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 025

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here
↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source: **NEC Australia Pty. Ltd.**

Date: **28/08/2000**

Subject: **Aligning test specification with TS 24.008v3.4.0.**

Work item:

Category:

(only one category
shall be marked
with an X)

- F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

- Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

- Corrections related to usage of LLC SAPI information element in GSM and in UMTS. LLC SAPI information element is used in GSM in Logical Link Control protocol (LLC), and is not needed in UMTS, since LLC was removed from the protocol stack. In PDP messages for UMTS though, LLC SAPI still exists for handover between UMTS and GSM. Difference between GSM and UMTS mode for the UE is that, in GSM, UE shall perform logical link establishment procedure if there is no logical link for LLC SAPI indicated by the network, during the procedure of PDP context activation initiated by the UE. In UMTS, the UE shall take no action with regards to LLC SAPI.
- Addition of test cases for Secondary PDP activation procedures. Clause 11.1.4 is describing test cases for secondary PDP procedures initiated by the UE. All test cases are completely new, since secondary PDP procedures are added in the R99 of core specification.
Secondary PDP activation procedures initiated by the UE are similar to PDP activation procedures initiated by the UE, hence added test cases are similar to existing test cases for PDP activation procedures initiated by the UE.

Clauses affected:

**11.1.1.1, 11.1.1.2.1.
11.1.4**

Other specs affected:

Other 3G core specifications ☐
Other GSM core specifications ☐
MS test specifications ☒

→ List of CRs:

→ List of CRs:

→ List of CRs:

Other
comments:

help.doc

<----- double-click here for help and instructions on how to create a CR.

11 Session Management Procedures

11.1 PDP context activation

11.1.1 Initiated by the UE

11.1.1.1 Attach initiated by context activation/QoS Offered by Network is the QoS Requested

11.1.1.1.1 Definition

11.1.1.1.2 Conformance requirement

PDP context activation shall initiate PS Attach by the UE to establish a GMM context, when the UE is PS Detached.

In order to request a PDP context activation, the UE sends an ACTIVATE PDP CONTEXT REQUEST message to the network, enters the state PDP-ACTIVE-PENDING and starts timer T3380. The message contains the selected NSAPI, PDP type, requested QoS and, if the UE requests a static address, the PDP address.

If the QoS offered by the network is the same as the QoS requested by the UE, then upon receipt of the message ACTIVATE PDP CONTEXT ACCEPT the UE shall stop timer T3380 ~~and shall initiate establishment of the logical link with the offered QoS.~~

In GSM, the MS shall initiate establishment of the logical link for the LLC SAPI indicated by the network with the offered QoS and selected radio priority level if no logical link has been already established for that SAPI.

In UMTS, both the network and the MS shall store the LLC SAPI and the radio priority in the PDP context. If a UMTS to GSM system change is performed, the new SGSN shall initiate establishment of the logical link using the negotiated QoS profile, the negotiated LLC SAPI, and selected radio priority level stored in the PDP context as in a GSM to GSM Routing Area Update.

An MS, which is capable of operating in both GSM and UMTS, shall use a valid LLC SAPI, while an MS which is capable of operating only in UMTS shall indicate the LLC SAPI value as "LLC SAPI not assigned" in order to avoid unnecessary value range checking and any other possible confusion in the network.

NOTE: The radio priority level and the LLC SAPI parameters, though not used in UMTS, shall be included in the messages, in order to support handover between UMTS and GSM networks.

Reference

3G TS 24.008 subclauses 6.1.3.1 and 6.1.3.1.1.

11.1.1.1.3 Test purpose

To check the UE initiates a PS attach if one is not already active.

To test the behaviour of the UE when SS responds to a PDP context activation request with the requested QoS.

11.1.1.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE and is in GMM-state "GMM-DEREGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Method of context activation

Test procedure

If the UE is attached a detach request is sent from the SS. UE replies with DETACH ACCEPT. A PDP context activation is then requested by the user. The PS attach (ATTACH REQUEST) is then indirectly caused by a requested PDP context activation. The SS returns the ATTACH ACCEPT message to the UE. Now session management can proceed with PDP context activation.

On receipt of the ACTIVATE PDP CONTEXT REQUEST message an ACTIVATE PDP CONTEXT ACCEPT is returned by the SS with the same requested QoS. The contents of the ACTIVATE PDP CONTEXT REQUEST message shall then be checked. The SS then waits for T3380seconds to ensure T3380 has been stopped and no more ACTIVATE PDP CONREXT REQUEST messages are sent by the UE. The SS then sends a MODIFY PDP CONTEXT REQUEST message to which the UE shall reply with a MODIFY PDP CONTEXT ACCEPT message to ensure the context has been set up.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		DETACH REQUEST	Only sent if the UE attaches at power-up, if not go to step 3.
2	→		DETACH ACCEPT	UE accepts the detach
3	UE			Initiate a context activation
4	→		ATTACH REQUEST	Request attach
5	←		ATTACH ACCEPT	Accept attach
6	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
7	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context activation
8	SS			Wait for T3380 seconds to ensure no further activate request messages come from the UE
9	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	SS sends a modify request to UE for the activated context
10	→		MODIFY PDP CONTEXT ACCEPT (UE TO NETWORK DIRECTION)	UE accepts the modification request from the network to show context is activated

Specific message contents

None.

11.1.1.1.5 Test requirements

To pass the test UE has to:

- initiate a PS ATTACH if one is not already active
- when the network responds to a PDP context activation request, initiated by the UE, with the requested QoS, the UE has to complete the PDP context activation procedure. To check if the PDP context activation was successful, SS shall request PDP context modification and UE shall accept it.

11.1.1.2 QoS offered by the network is a lower QoS

11.1.1.2.1 QoS accepted by UE

11.1.1.2.1.1 Definition

11.1.1.2.1.2 Conformance requirement

In order to request a PDP context activation, the UE sends an ACTIVATE PDP CONTEXT REQUEST message to the network enters the state PDP-ACTIVE-PENDING and starts timer T3380. If the QoS offered by the network is acceptable to UE, then upon receipt of the message ACTIVATE PDP CONTEXT ACCEPT the UE shall stop timer T3380 ~~initiate establishment of the logical link with the offered QoS~~.

In GSM, the MS shall initiate establishment of the logical link for the LLC SAPI indicated by the network with the offered QoS and selected radio priority level if no logical link has been already established for that SAPI.

In UMTS, both the network and the MS shall store the LLC SAPI and the radio priority in the PDP context.

Reference

3G TS 24.008 subclause 6.1.3.1.1.

11.1.1.2.1.3 Test purpose

To test the behaviour of the UE when the SS responds to a PDP context activation request with a lower QoS than that requested.

11.1.1.2.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- User setting of Minimum QoS supported yes/no
- Method of setting minimum QoS
- Method of context activation

Test procedure

The requested QoS and Minimum QoS are set. A context activation is requested by the user. On receipt of the ACTIVATE PDP CONTEXT REQUEST message an ACTIVATE PDP CONTEXT ACCEPT is returned by the SS with a QoS lower than the requested but higher than or equal to the minimum. The SS then sends a MODIFY PDP CONTEXT REQUEST message and the UE shall respond with a MODIFY PDP CONTEXT ACCEPT message to confirm the context is active.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
3		←	ACTIVATE PDP CONTEXT ACCEPT	Accept a PDP context activation
4		←	MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	Send a modify request to UE for the activated context
5	→		MODIFY PDP CONTEXT ACCEPT (UE TO NETWORK DIRECTION)	Accept the modification request from network to show context is activated

Specific message contents

None.

11.1.1.2.1.5 Test requirements

To pass the test UE shall:- when the network responds to a PDP context activation request, initiated by the UE, with the QoS lower than the requested but higher than or equal to the minimum, the UE has to complete the PDP context activation procedure. To see if the PDP context activation was successful, SS shall request PDP context modification and UE shall accept it.

11.1.1.2.2 QoS rejected by UE

11.1.1.2.2.1 Definition

11.1.1.2.2.2 Conformance requirement

In order to request a PDP context activation, the UE sends an ACTIVATE PDP CONTEXT REQUEST message to the network.

Upon receipt of the message ACTIVATE PDP CONTEXT ACCEPT offering a QoS which is not acceptable to the UE, the UE shall initiate the PDP context deactivation procedure.

Reference

3G TS 24.008 subclause 6.1.3.1.1.

11.1.1.2.2.3 Test purpose

To test the behaviour of the UE when the QoS offered by SS in response to a PDP context activation request is not acceptable to the UE.

11.1.1.2.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
 - User setting of Minimum QoS supported yes/no
 - Method of setting minimum QoS
- Method of context activation

Test procedure

The requested QoS and Minimum QoS are set. A context activation is requested by the user. On receipt of the ACTIVATE PDP CONTEXT REQUEST message an ACTIVATE PDP CONTEXT ACCEPT message is returned by the SS with a QoS lower than the minimum. The UE shall then send a DEACTIVATE PDP CONTEXT REQUEST message. A DEACTIVATE PDP CONTEXT ACCEPT message will be sent in return by the SS.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
3	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context activation
4	→		DEACTIVATE PDP CONTEXT REQUEST	Deactivate the PDP context
5	←		DEACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context deactivation

Specific message contents

None.

11.1.1.2.2.5 Test requirements

The UE shall reject the QoS offered by the network in response to a PDP context activation request, if the QoS is not acceptable to the UE.

11.1.2 PDP context activation requested by the network, successful and unsuccessful

11.1.2.1 Definition

This test needs to take into account the number of active PDP contexts supported simultaneously by the UE, to be able to test the response when all contexts are activated and the network tries to initiate a new context.

11.1.2.2 Conformance requirement

1) Upon receipt of a REQUEST PDP CONTEXT ACTIVATION message:

- If the UE accepts the request the UE shall then initiate the PDP context activation procedure.
- If the UE rejects the request, the UE shall send a REQUEST PDP CONTEXT ACTIVATION REJECT message with one of the following causes:

#26: insufficient resources;

#31: activation rejected, unspecified;

#40: feature not supported; or

#95 – 111: protocol errors.

2) The UE shall not ignore the request.

3) If the UE accepts the request, the ACTIVATE PDP CONTEXT REQUEST message sent by the UE shall contain the parameters requested by the network in the REQUEST PDP CONTEXT ACTIVATION message, except for the offered QoS which may be changed by the UE.

4) Whenever a REQUEST PDP CONTEXT ACTIVATION message is received by the UE specifying a transaction identifier relating to a PDP context not in state PDP-INACTIVE, the UE shall locally deactivate the old PDP context relating to the received transaction identifier. Furthermore, the UE shall continue with the activation procedure of a new PDP context as indicated in the received message.

Reference

3G TS 24.008 clauses 6.1.3.1.2, 6.1.3.1.4 and 8.3.2.f)

3G TS 27.060 clause 7.3.3.

11.1.2.3 Test purpose

To test the behaviour of the UE upon receipt of a context activation request from the SS.

11.1.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Network requested PDP context activation supported yes/no
- Number of network initiated PDP contexts supported

Case 1

For an UE that supports PDP context activation requested by the network.

Test procedure

A REQUEST PDP CONTEXT ACTIVATION message is sent by the SS. On receipt of the ACTIVATE PDP CONTEXT REQUEST message an ACTIVATE PDP CONTEXT ACCEPT message is returned by the SS. If all 7 contexts are supported then steps 5, 6 and 7 should not be performed. This is continued until the maximum number of contexts the UE supports are activated. When one more context is activated the UE shall return a REQUEST PDP CONTEXT ACTIVATION REJECT message with cause set to 'insufficient resources'. A REQUEST PDP CONTEXT ACTIVATION message is then sent using a currently activated context transaction identifier. The UE shall activate this context in place of the previous context.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		REQUEST PDP CONTEXT ACTIVATION	SS sends Request a PDP context activation to UE
2	→		ACTIVATE PDP CONTEXT REQUEST	UE replies with a Request PDP context activation
3	←		ACTIVATE PDP CONTEXT ACCEPT	SS accepts the PDP context activation
4		SS		Steps 1-3 are repeated for the number of Network Initiated contexts supported NOTE: If all 7 contexts are supported steps 5, 6 and 7 should not be performed SS requests a PDP context activation
5	←		REQUEST PDP CONTEXT ACTIVATION	The context activation request is rejected with cause 'insufficient resources'. SS requests a PDP context activation for an existing context
6	→		REQUEST PDP CONTEXT ACTIVATION REJECT	
7	←		REQUEST PDP CONTEXT ACTIVATION	
8	→		ACTIVATE PDP CONTEXT REQUEST	UE requests a PDP context activation to replace the existing context
9	←		ACTIVATE PDP CONTEXT ACCEPT	SS accepts the PDP context activation

Case 2

For an UE that does not support PDP context activation requested by the network.

Test procedure

A REQUEST PDP CONTEXT ACTIVATION message is sent by the SS. The UE shall then send an REQUEST PDP CONTEXT ACTIVATION REJECT message.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		REQUEST PDP CONTEXT ACTIVATION	Request a PDP context activation
2	→		REQUEST PDP CONTEXT ACTIVATION REJECT	Reject the PDP context activation request with cause 'insufficient resources' or 'feature not supported'.

Specific message contents

None.

11.1.2.5 Test requirements

An UE that is configured to support one or more PDP contexts simultaneously, with a number of active contexts lower than the maximum, shall accept PDP context activation initiated by the network.

The UE that does not support PDP Context Activation (a number of active contexts supported by the UE is equal to maximum or UE does not support PDP context) shall reject PDP context activation initiated by the network.

11.1.3 Abnormal Cases

11.1.3.1 T3380 Expiry

11.1.3.1.1 Definition

11.1.3.1.2 Conformance requirement

- 1) On the first expiry of the timer T3380, the UE shall re-send the PDP CONTEXT ACTIVATION REQUEST
- 2) On the second expiry of the timer T3380, the UE shall re-send the PDP CONTEXT ACTIVATION REQUEST
- 3) On the third expiry of the timer T3380, the UE shall re-send the PDP CONTEXT ACTIVATION REQUEST
- 4) On the fourth expiry of the timer T3380, the UE shall re-send the PDP CONTEXT ACTIVATION REQUEST
- 5) On the fifth expiry of the timer T3380, the UE shall release all resources possibly allocated for this invocation and shall abort the procedure; no automatic PDP context activation re-attempt shall be performed.

Reference

3G TS 24.008 subclause 6.1.3.1.5 a).

11.1.3.1.3 Test purpose

To test the behaviour of the UE when the SS does not reply to PDP CONTEXT ACTIVATION REQUEST.

11.1.3.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Method of activating a context

Test procedure

A context activation is requested by the user. The UE shall send the ACTIVATE PDP CONTEXT REQUEST message five times with T3380 seconds between each message. After this no further ACTIVATE PDP CONTEXT REQUEST messages shall be sent by the UE.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
3		SS		T3380 seconds
4	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
5		SS		T3380 seconds
6	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
7		SS		T3380 seconds
8	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
9		SS		T3380 seconds
10	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
11		SS		Wait for T3380 seconds to ensure no further ACTIVATE PDP CONTEXT REQUEST messages are sent by the UE

Specific message contents

None.

11.1.3.1.5 Test requirements

UE shall resend the ACTIVATE PDP CONTEXT REQUEST to SS five times in order to initiate PDP context, with expiry of timer T3380 between messages. After fifth try, UE shall send no more ACTIVATE PDP CONTEXT REQUEST to SS.

11.1.3.2 Collision of UE initiated and network requested PDP context activation

11.1.3.2.1 Definition

This test needs to take into account the number of PDP contexts supported by the UE, to be able to test the response when the network tries to initiate a new context.

11.1.3.2.2 Conformance requirement

A collision of an MS initiated and a network requested PDP context activation procedure is identified by the MS if a REQUEST PDP CONTEXT ACTIVATION message is received from the network after the MS has sent an ACTIVATE PDP CONTEXT REQUEST message, and the MS has not yet received an ACTIVATE PDP CONTEXT ACCEPT or ACTIVATE PDP CONTEXT REJECT message.

Reference

3G TS 24.008 subclause 6.1.3.1.5 b), case: Static PDP address collision detected within the UE.

11.1.3.2.3 Test purpose

To test the behaviour of the UE when there is a collision between an UE initiated and SS requested PDP context activation detected by the UE.

11.1.3.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Method of PDP context activation

Case 1

For an UE that supports PDP context activation requested by the network.

Test procedure

A context activation is requested by the user. After receipt of the ACTIVATE PDP CONTEXT REQUEST message the SS sends a REQUEST PDP CONTEXT ACTIVATION message followed by an ACTIVATE PDP CONTEXT ACCEPT message in a time less than T3380 (Use T3380/2). The UE shall send no messages within this time.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
3	←		REQUEST PDP CONTEXT ACTIVATION	Request a PDP context activation request
4		SS		Wait for T3380/2 seconds to ensure UE does not resend ACTIVATE PDP CONTEXT REQUEST
5	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context activation

Case 2

For an UE that does not support PDP context activation requested by the network.

Test procedure

A context activation is requested by the user. After receipt of the ACTIVATE PDP CONTEXT REQUEST message the SS sends a REQUEST PDP CONTEXT ACTIVATION message. The UE shall send a REQUEST PDP CONTEXT ACTIVATION REJECT message with cause set to 'insufficient resources' or 'feature not supported'. The SS then sends an ACTIVATE PDP CONTEXT ACCEPT.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation
3	←		REQUEST PDP CONTEXT ACTIVATION	Request a PDP context activation request
4	→		REQUEST PDP CONTEXT ACTIVATION REJECT	Cause set to 'insufficient resources' or 'feature not supported'.
5	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context activation

Specific message contents

None.

11.1.3.2.5 Test requirements

In the case of such collision,

- the UE that supports PDP context activation requested by the network shall discard the REQUEST PDP CONTEXT ACTIVATION message from SS and wait for an ACTIVATE PDP CONTEXT ACCEPT message.
- the UE that does not support PDP context activation requested by the network shall reject PDP context activation initiated by the SS.

11.1.4 Secondary PDP context activation procedures ~~(FFS)~~

~~11.1.4.1 Secondary PDP context activation procedure, successful and unsuccessful~~

11.1.4.1 Successful Secondary PDP Context Activation Procedure Initiated by the UE

11.1.4.1.1 QoS Offered by Network is the QoS Requested

11.1.4.1.1.1 Definition

11.1.4.1.1.2 Conformance requirement

In order to request a secondary PDP context activation, the UE sends an ACTIVATE SECONDARY PDP CONTEXT REQUEST message to the network, enters the state PDP-ACTIVE-PENDING and starts timer T3380. The message contains the selected NSAPI, a QoS profile, a requested LLC SAPI and the linked TI.

If the QoS offered by the network is the same as the QoS requested by the UE, then upon receipt of the message ACTIVATE SECONDARY PDP CONTEXT ACCEPT, the UE shall stop timer T3380.

In GSM the UE shall initiate establishment of the logical link for the LLC SAPI indicated by the network, with the offered QoS and selected radio priority level, if no logical link has been already established for that SAPI.

Although not used in UMTS, LLC SAPI shall be included in the messages, in order to support handover between UMTS and GSM networks.

Reference

3G TS 24.008 subclauses 6.1.3.2 and 6.1.3.2.1.

11.1.4.1.1.3 Test purpose

To test the behaviour of the UE when SS responds to a Secondary PDP context activation request with the requested QoS.

11.1.4.1.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE and is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Method of context activation

Test procedure

On receipt of the ACTIVATE SECONDARY PDP CONTEXT REQUEST message an ACTIVATE SECONDARY PDP CONTEXT ACCEPT is returned by the SS with the same requested QoS. The SS then waits for T3380 seconds to ensure T3380 has been stopped and no more ACTIVATE SECONDARY PDP CONREXT REQUEST messages are

sent by the UE. The SS then sends a MODIFY PDP CONTEXT REQUEST message to which the UE shall reply with a MODIFY PDP CONTEXT ACCEPT message to ensure the context has been set up.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>	→		ACTIVATE SECONDARY PDP CONTEXT REQUEST	Request a Secondary PDP context activation
<u>2</u>	←		ACTIVATE SECONDARY PDP CONTEXT ACCEPT	Accept the Secondary PDP context activation
<u>3</u>		SS		Wait for T3380 seconds to ensure no further activate request messages come from the UE
<u>4</u>	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	SS sends a modify request to UE for the activated context
<u>5</u>	→		MODIFY PDP CONTEXT ACCEPT (UE TO NETWORK DIRECTION)	UE accepts the modification request from the network to show context is activated

Specific message contents

None.

11.1.4.1.1.5 Test requirements

To pass the test the UE has to:

- when the network responds to a Secondary PDP context activation request initiated by the UE, with the requested QoS, the UE shall complete the Secondary PDP context activation procedure. To check if the Secondary PDP context activation was successful, SS shall request PDP context modification and UE shall accept it.

11.1.4.1.2 QoS Offered by Network is a lower QoS

11.1.4.1.2.1 QoS accepted by UE

11.1.4.1.2.1.1 Definition

11.1.4.1.2.1.2 Conformance requirement

In order to request a Secondary PDP context activation, the UE sends an ACTIVATE SECONDARY PDP CONTEXT REQUEST message to the network, enters the state PDP-ACTIVE-PENDING and starts timer T3380. If the QoS offered by the network is acceptable to UE, then upon receipt of the message ACTIVATE SECONDARY PDP CONTEXT ACCEPT the UE shall stop timer T3380.

In GSM the UE shall initiate establishment of the logical link for the LLC SAPI indicated by the network, with the offered QoS and selected radio priority level, if no logical link has been already established for that SAPI.

Reference

3G TS 24.008 subclauses 6.1.3.2 and 6.1.3.2.1.

11.1.4.1.2.1.3 Test purpose

To test the behaviour of the UE when the SS responds to a Secondary PDP context activation request with a lower QoS than that requested.

11.1.4.1.2.1.4 Method of testInitial conditionsSystem Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- User setting of Minimum QoS supported yes/no
- Method of setting minimum QoS
- Method of context activation

Test procedure

The requested QoS and Minimum QoS are set. A secondary context activation is requested by the user. On receipt of the ACTIVATE SECONDARY PDP CONTEXT REQUEST message an ACTIVATE SECONDARY PDP CONTEXT ACCEPT is returned by the SS with a QoS lower than the requested but higher than or equal to the minimum. The SS then sends a MODIFY PDP CONTEXT REQUEST message and the UE shall respond with a MODIFY PDP CONTEXT ACCEPT message to confirm the context is active.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>	<u>UE</u>			<u>Initiate a context activation</u>
<u>2</u>	<u>→</u>		<u>ACTIVATE SECONDARY PDP CONTEXT REQUEST</u>	<u>Request a Secondary PDP context activation</u>
<u>3</u>		<u>←</u>	<u>ACTIVATE SECONDARY PDP CONTEXT ACCEPT</u>	<u>Accept a Secondary PDP context activation</u>
<u>4</u>		<u>←</u>	<u>MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)</u>	<u>Send a modify request to UE for the activated context</u>
<u>5</u>	<u>→</u>		<u>MODIFY PDP CONTEXT ACCEPT (UE TO NETWORK DIRECTION)</u>	<u>Accept the modification request from network to show context is activated</u>

Specific message contents

None.

11.1.4.1.2.1.5 Test requirements

To pass the test UE shall:

- when the network responds to a Secondary PDP context activation request, initiated by the UE, with the QoS lower than the requested but higher than or equal to the minimum, the UE shall complete the Secondary PDP context activation procedure. To see if the PDP context activation was successful, SS shall request PDP context modification and UE shall accept it.

11.1.4.1.2.2 QoS rejected by UE

11.1.4.1.2.2.1 Definition

11.1.4.1.2.2.2 Conformance requirement

In order to request a Secondary PDP context activation, the UE sends an ACTIVATE SECONDARY PDP CONTEXT REQUEST message to the network.

Upon receipt of the message ACTIVATE SECONDARY PDP CONTEXT ACCEPT offering a QoS which is not acceptable to the UE, the UE shall initiate the PDP context deactivation procedure.

Reference

3G TS 24.008 subclauses 6.1.3.2 and 6.1.3.2.1.

11.1.4.1.2.2.3 Test purpose

To test the behaviour of the UE when the QoS offered by SS in response to a Secondary PDP context activation request is not acceptable to the UE.

11.1.4.1.2.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- User setting of Minimum QoS supported yes/no
- Method of setting minimum QoS
 - Method of context activation

Test procedure

The requested QoS and Minimum QoS are set. A context activation is requested by the user. On receipt of the ACTIVATE SECONDARY PDP CONTEXT REQUEST message an ACTIVATE SECONDARY PDP CONTEXT ACCEPT message is returned by the SS with a QoS lower than the minimum. The UE shall then send a DEACTIVATE PDP CONTEXT REQUEST message for the secondary PDP context. A DEACTIVATE PDP CONTEXT ACCEPT message will be sent in return by the SS.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>	<u>UE</u>			<u>Initiate a secondary context activation</u>
<u>2</u>	<u>→</u>		<u>ACTIVATE SECONDARY PDP CONTEXT REQUEST</u>	<u>Request a Secondary PDP context activation</u>
<u>3</u>		<u>←</u>	<u>ACTIVATE SECONDARY PDP CONTEXT ACCEPT</u>	<u>Accept the Secondary PDP context activation with QoS lower than Minimum QoS</u>
<u>4</u>	<u>→</u>		<u>DEACTIVATE PDP CONTEXT REQUEST</u>	<u>Request deactivation of the secondary PDP context</u>
<u>5</u>		<u>←</u>	<u>DEACTIVATE PDP CONTEXT ACCEPT</u>	<u>Accept the PDP context deactivation</u>

Specific message contents

Tear down indicator IE shall not be included in the DEACTIVATE PDP CONTEXT REQUEST message because only the PDP context for this specific TI shall be deactivated.

11.1.4.1.2.2.5 Test requirements

The UE shall reject the QoS offered by the network in response to a Secondary PDP context activation request, if the QoS is not acceptable to the UE.

11.1.4.2 Abnormal cases11.1.4.2.1 Expiry of timers

(The same tests shall apply as for UE initiated PDP context activation 8.4.1.3.1 and 8.4.1.3.2.)

11.1.4.2.1 T3380 Expiry11.1.4.2.1.1 Definition11.1.4.2.1.2 Conformance requirement

- 1) On the first expiry of the timer T3380, the UE shall re-send the ACTIVATE SECONDARY PDP CONTEXT REQUEST
- 2) On the second expiry of the timer T3380, the UE shall re-send the ACTIVATE SECONDARY PDP CONTEXT REQUEST
- 3) On the third expiry of the timer T3380, the UE shall re-send the ACTIVATE SECONDARY PDP CONTEXT REQUEST
- 4) On the fourth expiry of the timer T3380, the UE shall re-send the ACTIVATE SECONDARY PDP CONTEXT REQUEST
- 5) On the fifth expiry of the timer T3380, the UE shall release all resources possibly allocated for this invocation and shall abort the procedure; no automatic secondary PDP context activation re-attempt shall be performed.

Reference

3G TS 24.008 subclause 6.1.3.2.3 a).

11.1.4.2.1.3 Test purpose

To test the behaviour of the UE when the SS does not reply to ACTIVATE SECONDARY PDP CONTEXT REQUEST message.

11.1.4.2.1.4 Method of testInitial conditionsSystem Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Method of activating a context

Test procedure

A secondary PDP context activation is requested by the user. The UE shall send ACTIVATE SECONDARY PDP CONTEXT REQUEST message five times with T3380 seconds between each message. After this no further ACTIVATE SECONDARY PDP CONTEXT REQUEST messages shall be sent by the UE.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>	<u>UE</u>			<u>Initiate a context activation</u>
<u>2</u>	<u>→</u>		<u>ACTIVATE SECONDARY PDP CONTEXT REQUEST</u>	<u>Request a Secondary PDP context activation</u>
<u>3</u>		<u>SS</u>		<u>T3380 seconds</u>
<u>4</u>	<u>→</u>		<u>ACTIVATE SECONDARY PDP CONTEXT REQUEST</u>	<u>Request a Secondary PDP context activation</u>
<u>5</u>		<u>SS</u>		<u>T3380 seconds</u>
<u>6</u>	<u>→</u>		<u>ACTIVATE SECONDARY PDP CONTEXT REQUEST</u>	<u>Request a Secondary PDP context activation</u>
<u>7</u>		<u>SS</u>		<u>T3380 seconds</u>
<u>8</u>	<u>→</u>		<u>ACTIVATE SECONDARY PDP CONTEXT REQUEST</u>	<u>Request a Secondary PDP context activation</u>
<u>9</u>		<u>SS</u>		<u>T3380 seconds</u>
<u>10</u>	<u>→</u>		<u>ACTIVATE SECONDARY PDP CONTEXT REQUEST</u>	<u>Request a Secondary PDP context activation</u>
<u>11</u>		<u>SS</u>		<u>Wait for T3380 seconds to ensure no further ACTIVATE SECONDARY PDP CONTEXT REQUEST messages are sent by the UE</u>

Specific message contents

None.

11.1.4.2.1.5 Test requirements

UE shall resend the ACTIVATE SECONDARY PDP CONTEXT REQUEST to SS five times in order to initiate a Secondary PDP context, with expiry of timer T3380 between messages. After fifth try, UE shall send no more ACTIVATE SECONDARY PDP CONTEXT REQUEST messages to SS.

~~11.1.4.2.2 UE initiated secondary PDP context activation for an already activated secondary PDP context (on the network side)~~

Editor's note: This heading is deleted because it is related to the network function.

11.2 PDP context modification procedure

11.2.1 Network initiated PDP context modification

11.2.1.1 Definition

This test can only be performed if minimum QoS can be set by the user.

11.2.1.2 Conformance requirement

1) Upon receipt of a MODIFY PDP CONTEXT REQUEST message

- If the UE can accept the modification requested, the UE shall reply with the MODIFY PDP CONTEXT ACCEPT message.
- If the UE is unable to accept the modification requested, the UE shall initiate the PDP context deactivation procedure for the NSAPI that has been indicated in the message MODIFY PDP CONTEXT REQUEST - the reject cause IE value of the DEACTIVATE PDP CONTEXT REQUEST message shall indicate "QoS not accepted".

2) The UE shall either accept the modification request or deactivate the PDP context, it shall not ignore the modification request.

Reference

3G TS 24.008 subclauses 6.1.3.3 and 6.1.3.3.1.

11.2.1.3 Test purpose

To test the behaviour of the UE upon receipt of a MODIFY PDP CONTEXT REQUEST message from SS.

11.2.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- User setting of Minimum QoS supported yes/no

- Method of setting minimum QoS
- Method of activating a PDP context

Test procedure

A PDP context is activated by the user and accepted by the SS. A MODIFY PDP CONTEXT REQUEST message is then sent to the UE with a QoS that is acceptable to the UE (higher than or equal to the minimum QoS set in the UE). The UE shall send a MODIFY PDP CONTEXT ACCEPT message in return. A MODIFY PDP CONTEXT REQUEST message is then sent to the UE with a QoS that is not acceptable to the UE (lower than the minimum QoS set in the UE). The UE shall send a DEACTIVATE PDP CONTEXT REQUEST message in return.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context
3	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context
4	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	Request the modification of a PDP context, with QoS higher than or equal to the minimum QoS set in the UE
5	→		MODIFY PDP CONTEXT ACCEPT (UE TO NETWORK DIRECTION)	Accept the PDP context modification
6	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	Request the modification of a PDP context, QoS lower than the minimum QoS set in the UE
7	→		DEACTIVATE PDP CONTEXT REQUEST	Reject the PDP context modification by deactivating the PDP context. Cause set to 'QoS not acceptable'
8	←		DEACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context deactivation

Specific message contents

None.

11.2.1.5 Test requirements

The UE shall:

- Accept PDP context modification initiated by the SS if QoS is higher than or equal to the minimum QoS set in the UE
- Reject PDP context modification initiated by the SS if QoS is lower than the minimum QoS set in the UE.

11.2.2 UE initiated PDP context modification (FFS)

11.2.3 Abnormal cases (FFS)

11.2.3.1 T3381 expiry

11.2.3.2 Collision of UE and network initiated PDP context modification procedures

11.3 PDP context deactivation procedure

11.3.1 PDP context deactivation initiated by the UE

11.3.1.1 Definition

11.3.1.2 Conformance requirement

The DEACTIVATE PDP CONTEXT REQUEST message sent by UE contains the transaction identifier in use for the PDP context to be deactivated and a cause code that typically indicates one of the following causes:

- #25: LLC or SNDCCP failure(GSM only) ; #26: insufficient resources;
- #36: regular PDP context deactivation; or
- #37: QoS not accepted.

Upon receipt of the DEACTIVATE PDP CONTEXT ACCEPT message, the UE shall stop timer T3390.

- Whenever any session management message except REQUEST PDP CONTEXT ACTIVATION or SM-STATUS is received by the UE specifying a transaction identifier which is not recognised as relating to an active context or to a context that is in the process of activation or deactivation or has been [recently] deactivated, the UE shall send a SM-STATUS message with cause #81 "invalid transaction identifier value" using the received transaction identifier value including the extension octet and remain in the PDP-INACTIVE state.

Reference

3G TS 24.008 subclauses 6.1.3.4 ,6.1.3.4.1 and 8.3.2 (b).

11.3.1.3 Test purpose

To test the behaviour of the UE upon receipt of a DEACTIVATE PDP CONTEXT ACCEPT message from the SS in PDP context deactivation procedure initiated by the UE.

11.3.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no

- Method of activating a PDP context
- Method of deactivating the PDP context

Test procedure

A PDP context is activated by the user and accepted by the SS. The context deactivation is then requested by the user. The UE shall send a DEACTIVATE PDP CONTEXT REQUEST message to the SS. The SS shall then reply with a DEACTIVATE PDP CONTEXT ACCEPT message. The SS shall then wait for T3390 seconds to ensure T3390 has been stopped and that no further messages are sent from the UE. The SS shall then send a MODIFY PDP CONTEXT REQUEST for the deactivated context and the UE shall reply with an SM STATUS message with cause #81 'transaction identifier not known'.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context
3	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context
4	UE			Initiate a context deactivation
5	→		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
6	←		DEACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context deactivation
7	SS			Wait for T3390 seconds to ensure no further deactivate request messages are sent
8	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	Send a modify request to UE for the deactivated context.
9	→		SM STATUS	Cause set to #81

Specific message contents

None.

11.3.1.5 Test requirements

In PDP context deactivation procedure initiated by the UE, upon receipt of a DEACTIVATE PDP CONTEXT ACCEPT message from the SS, the UE shall deactivate PDP context associated with given PDP address and TI.

Then, upon modification procedure initiated by the network, for deactivated PDP context, UE shall reply with SM STATUS message with cause #81.

11.3.2 PDP context deactivation initiated by the network

11.3.2.1 Definition

11.3.2.2 Conformance requirement

The DEACTIVATE PDP CONTEXT REQUEST message sent by SS contains the transaction identifier in use for the PDP context to be deactivated and a cause code that typically indicates one of the following causes:

- # 25: LLC or SNDCP failure (GSM only);
- # 36: regular PDP context deactivation;
- # 38: network failure; or
- # 39: reactivation requested.

The UE shall, upon receipt of the DEACTIVATE PDP CONTEXT REQUEST message from network, reply with a DEACTIVATE PDP CONTEXT ACCEPT message.

- Whenever any session management message except REQUEST PDP CONTEXT ACTIVATION or SM-STATUS is received by the UE specifying a transaction identifier which is not recognised as relating to an active context or to a context that is in the process of activation or deactivation or has been [recently] deactivated, the UE shall send a SM-STATUS message with cause #81 "invalid transaction identifier value" using the received transaction identifier value and remain in the PDP-INACTIVE state.

Reference

3G TS 24.008 subclauses 6.1.3.4, 6.1.3.4.2 and 8.3.2 (b).

11.3.2.3 Test purpose

To test the behaviour of the UE upon receipt of a DEACTIVATE PDP CONTEXT REQUEST message from the SS.

11.3.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Method of activating a PDP context

Test procedure

A PDP context is activated by the user and accepted by the SS. A DEACTIVATE PDP CONTEXT REQUEST message is then sent by the SS. The UE shall reply with a DEACTIVATE PDP CONTEXT ACCEPT message. The SS shall then send a MODIFY PDP CONTEXT REQUEST for the deactivated context and the UE shall reply with an SM STATUS message with cause #81 'transaction identifier not known'.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context
3	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context
4	←		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
5	→		DEACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context deactivation.
6	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	Send a modify request to UE for the deactivated context.
7	→		SM STATUS	Cause set to #81

Specific message contents

None.

11.3.2.5 Test requirements

Upon receipt of a request for deactivation of a PDP context from the SS, the UE shall deactivate PDP context. Then, upon modification procedure initiated by the network, for deactivated PDP context, UE shall reply with SM STATUS message with cause #81.

11.3.3 Abnormal cases

11.3.3.1 T3390 Expiry

11.3.3.1.1 Definition

11.3.3.1.2 Conformance requirement

- 1) On the first expiry of timer T3390, the UE shall resend the message DEACTIVATE PDP CONTEXT REQUEST
- 2) On the second expiry of timer T3390, the UE shall resend the message DEACTIVATE PDP CONTEXT REQUEST
- 3) On the third expiry of timer T3390, the UE shall resend the message DEACTIVATE PDP CONTEXT REQUEST
- 4) On the fourth expiry of timer T3390, the UE shall resend the message DEACTIVATE PDP CONTEXT REQUEST
- 5) On the fifth expiry of timer T3390, the UE shall release all resources allocated and shall erase the PDP context related data.

Reference

3G TS 24.008 subclause 6.1.3.4.3 a) case In the UE.

11.3.3.1.3 Test purpose

To test the behaviour of the UE when the SS does not reply to a DEACTIVATE PDP CONTEXT REQUEST message from the UE.

11.3.3.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

- PS Supported yes/no
- Method of activating a PDP context
- Method of deactivating a PDP context

Test procedure

A PDP context is activated by the user and accepted by the SS. A context deactivation is then requested by the user. The UE shall send a DEACTIVATE PDP CONTEXT REQUEST message five times with T3390 seconds between each message. T3390 seconds after the fifth message the SS shall send a MODIFY PDP CONTEXT REQUEST message for the deactivated context and the UE shall reply with SM STATUS with cause set to #81 'Transaction identifier not known'.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context
3	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context
4	UE			Initiate a context deactivation
5	→		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
6	SS			T3390 seconds
7	→		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
8	SS			T3390 seconds
9	→		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
10	SS			T3390 seconds
11	→		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
12	SS			T3390 seconds
13	→		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
14	SS			Wait T3390 seconds
15	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	Try to modify the deactivated context.
16	→		SM STATUS	Cause set to #81

Specific message contents

None.

11.3.3.1.5 Test requirements

If network does not reply to UE initiated PDP context deactivation procedure, the UE shall retransmit a DEACTIVATE PDP CONTEXT REQUEST five times, with T3390 timer expiry between the successive messages, before releasing resources allocated to the PDP context and deleting PDP context related data.

11.3.3.2 Collision of UE and network initiated PDP context deactivation requests

11.3.3.2.1 Definition

11.3.3.2.2 Conformance requirement

If the UE and the network initiated PDP context deactivation requests collide, the UE and the network shall each reply with the message DEACTIVATE PDP CONTEXT ACCEPT and shall stop timer T3390 and T3395, respectively.

Reference

3G TS 24.008 subclause 6.1.3.4.3 b).

11.3.3.2.3 Test purpose

To test the behaviour of the UE when there is a collision between an UE initiated and SS initiated context deactivation.

11.3.3.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN

Related ICS/IXIT statements

- PS Supported yes/no
- Method of activating a PDP context
- Method of deactivating a PDP context

Test procedure

A PDP context is activated by the user and accepted by the SS. A context deactivation is then requested by the user. Upon receipt of the DEACTIVATE PDP CONTEXT REQUEST message the SS sends a DEACTIVATE PDP CONTEXT REQUEST message. The UE shall reply with only one DEACTIVATE PDP CONTEXT ACCEPT message. Upon receipt of this message the SS sends a DEACTIVATE PDP CONTEXT ACCEPT message.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			Initiate a context activation
2	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context
3	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context
4	UE			Initiate a context deactivation
5	→		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
6	←		DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation of a PDP context
7	→		DEACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context deactivation
8	←		DEACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context deactivation

Specific message contents

None.

11.3.3.2.5 Test requirements

When UE and SS initiates PDP context deactivation requests collide, the UE shall reply with DEACTIVATE PDP CONTEXT ACCEPT to SS.

11.4 Unknown or Unforeseen Transaction Identifier/Non-semantic Mandatory Information Element Errors

11.4.1 Error cases

11.4.1.1 Definition

11.4.1.2 Conformance requirement

The mobile station shall ignore a session management message with TI EXT bit = 0. Otherwise, the following procedures shall apply:

- Whenever any session management message, except REQUEST PDP CONTEXT ACTIVATION or SM-STATUS, is received by the UE specifying a transaction identifier which is not recognized as relating to an active context or to a context that is in the process of activation or deactivation or has been [recently] deactivated, the UE shall send a SM-STATUS message with cause #81 “invalid transaction identifier value” using the received transaction identifier value including the extension octet and remain in the PDP-INACTIVE state.
- When a REQUEST PDP CONTEXT ACTIVATION message is received with a transaction identifier flag set to “1”, this message shall be ignored.

When on receipt of a message,

- an “imperative message part” error; or
- a “missing mandatory IE” error

is diagnosed or when a message containing:

- a syntactically incorrect mandatory IE; or
- an IE unknown in the message, but encoded as “comprehension required” or
- an out of sequence IE encoded as “comprehension required”

is received, the UE shall proceed as follows:

If the message was a SM message the SM-STATUS message with cause # 96 “invalid mandatory information” shall be returned.

If a mobile station receives a GMM message or SM message with message type not defined for the PD or not implemented by the receiver, it shall return a status message (GMM STATUS or SM STATUS depending on the protocol discriminator) with cause #97 ‘message type non-existent or not implemented’.

If the mobile station receives a message not compatible with the protocol state, the mobile station shall ignore the message except for the fact that when the message was a SM message the SM-STATUS message with cause #98 ‘Message type not compatible with protocol state’ shall be returned.

Other syntactic errors

This section applies to the analysis of the value part of an information element. It defines the following terminology:

- An IE is defined to be syntactically incorrect in a message if it contains at least one value defined as ‘reserved’, or if its value part violates syntactic rules given in the specification of the value part. However it is not a syntactical error that a type 4 standard IE specifies in its length indicator a greater length than possible according to the value part specification : extra bits are ignored.

Reference

3G TS 24.008 clauses 8.3.2 and 8.5 and 3G TS 24.007 clause 11.4.2.

11.4.1.3 Test purpose

To test the behaviour of the UE when messages with unknown or unforeseen transaction identifiers or non-semantical mandatory information element errors occur.

11.4.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

Related ICS/IXIT statements

-

Test procedure

A PDP context activation is requested by the SS with the transaction identifier set to '1'. The UE shall not respond to this request.

A PDP context is then activated from the UE. Two invalid accept messages are then sent by the SS with T3380 seconds between them. After a further T3380 seconds a valid accept message is sent by the SS.

A deactivate message is then sent from the SS with the transaction identifier set to '111'. The UE shall reply with a SM STATUS message with transaction identifier set to '111'.

A deactivate message is then sent from the SS with a different transaction identifier to the one used in the activate request message sent by the UE. The UE shall reply with a SM STATUS message with cause #81 'invalid transaction identifier value'.

Three invalid modification messages are then sent to the UE in turn. The UE shall respond each time with a SM-STATUS message with cause # 96 "invalid mandatory information".

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		REQUEST PDP CONTEXT ACTIVATION	Request the activation of a PDP context with the transaction identifier flag set to "1"
2		SS		Wait 30 seconds to ensure UE does not request context activation
3	UE			Initiate a context request
4	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context from the UE
5	←		ACTIVATE PDP CONTEXT ACCEPT	Unknown IE encoded as 'comprehension required'
6	→		SM STATUS	Cause set to #96
7		SS		Wait T3380 seconds
8	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context from the UE (auto-generated)
9	←		ACTIVATE PDP CONTEXT ACCEPT	Out of sequence IE encoded as 'comprehension required'
10	→		SM STATUS	Cause set to #96
11		SS		Wait T3380 seconds
12	→		ACTIVATE PDP CONTEXT REQUEST	Activate a PDP context from the UE (auto-generated)
13	←		ACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context
16	←		DEACTIVATE PDP CONTEXT REQUEST	Try to deactivate the context with a different transaction identifier to that used to activate the context
17	→		SM STATUS	Cause set to # 81
18	←		MODIFY PDP CONTEXT REQUEST(NETWORK TO UE DIRECTION)	Request the modification of the PDP context
19	→		SM STATUS	Cause set to # 96
20	←		MODIFY PDP CONTEXT REQUEST(NETWORK TO UE DIRECTION)	Request the modification of the PDP context
21	→		SM STATUS	Cause set to # 96
22	←		MODIFY PDP CONTEXT REQUEST(NETWORK TO UE DIRECTION)	Request the modification of the PDP context
23	→		SM STATUS	Cause set to # 96

11.4.1.5

Test requirements

TBD.

3GPP/T1 #8
Naantali, Finland, 31-01 Sep 2000

3GPP/T1S #12
Naantali, Finland, 28-30 Aug 2000

Document **T1-000209**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

Document **T1S-000192r1**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 033

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T1#8**

list expected approval meeting # here
↑

for approval
for information

☒

☐

strategic
non-strategic

☐

☐

(for SMG
use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

SONY

Date:

31/08/2000

Subject:

Introduction of the Authentication rejected by the UE test cases.

Work item:

Category:

(only one category
shall be marked
with an X)

F Correction

A Corresponds to a correction in an earlier release

B Addition of feature

C Functional modification of feature

D Editorial modification

☐

☐

☐

☒

☐

Release:

Phase 2

Release 96

Release 97

Release 98

Release 99

Release 00

☐

☐

☐

☐

☒

☐

**Reason for
change:**

It is necessary to introduce new test cases in order to keep consistency with the changes of the core specification.

It is also necessary to change title of sub-clause, associated with this introduction.

Some editorial mistakes have been corrected.

Clauses affected:

12.6.1.2, 12.6.1.3

**Other specs
affected:**

Other 3G core specifications

Other GSM core
specifications

MS test specifications

BSS test specifications

O&M specifications

☐

☐

☐

☐

☐

☐

→ List of CRs:

→ List of CRs:

→ List of CRs:

→ List of CRs:

→ List of CRs:

→ List of CRs:

**Other
comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

12.6.1.2 Authentication rejected by the network

12.6.1.2.1 Definition

12.6.1.2.2 Conformance requirement

- 1) After reception of an Authentication Reject message the User Equipment UE shall:
 - 1.1 not perform normal routing area updating
 - 1.2 not perform periodic routing area updating
 - 1.3 not perform PS detach if switched off
- 2) The User Equipment UE shall delete the stored RAI, PS-CKSN P-TMSI and P-TMSI signature. USIM shall be considered invalid until power is switched off or USIM is removed.

Reference

3G TS 24.008 clauses 4.7.7

12.6.1.2.3 Test purpose

To test the behaviour of the UE if the network rejects the authentication and ciphering procedure.

12.6.1.2.4 Method of test

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1, cell B in MCC1/MNC1/LAC1/RAC2.
Both cells are operating in network operation mode II.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

Support of PS service	Yes/No
UE operation mode A	Yes/No
UE operation mode C	Yes/No
Switch off on button	Yes/No
Automatic PS attach procedure at switch on or power on	Yes/No

Test procedure

A PS attach is performed, and the SS rejects the authentication and ciphering procedure.

The SS checks that the UE does not perform normal routing area updating, does not perform periodic routing area updating and does not perform PS detach if switched off.

T3312; set to 10 minutes.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS	ATTACH REQUEST	The following messages are sent and shall be received on cell A. The SS activates cell A.
2	UE			The UE is set in UE operation mode C (see ICS). If UE operation mode C not supported, goto step 14.
3	UE			The UE is powered up or switched on and initiates an attach (see ICS).
4	->			Attach type = 'PS attach' Mobile identity = IMSI
5	<-			Request authentication.
6	->			Set PS-CKSN-1
7	<-			Mobile identity = IMSI
8	UE			Paging order is for TBF establishment. No response from the UE to the request. This is checked for 10 seconds.
9		SS		The following messages are sent and shall be received on cell B. Activate cell B with a lower signal strength than cell A The RF level of cell A is lowered until cell B is preferred by the UE.
10	UE			No ROUTING AREA UPDATING REQUEST sent to the SS (SS waits 30 seconds).
11	UE			No periodic ROUTING AREA UPDATING REQUEST sent to the SS (SS waits T3310).
12	UE			The UE is switched off (see ICS).
13	SS			No DETACH REQUEST sent to the SS (SS waits 30 seconds).
14	UE			The UE is set in UE operation mode A (see ICS) and the test is repeated from step 1 to step 13.

12.6.1.2.5 Test requirements

UE shall:

- initiate a PS attach procedure with information elements specified in the above Expected Sequence when UE is powered on or switched on.

After UE sends the AUTHENTICATION AND CIPHERING REJECT message, UE shall:

- not perform normal routing area updating when the RF level of the attached cell is lower than the RF level of the new cell.
- not perform a periodic routing area updating when the timer T3312 expires.
- not perform PS detach when UE is switched off.
- delete the stored RAI, PS-CKSN, P-TMSI and P-TMSI signature.
- consider the USIM as invalid until power is switched off or USIM is removed.

12.6.1.3 Authentication rejected by the UE

12.6.1.3.1 GMM cause 'MAC failure'

12.6.1.3.1.1 Definition

12.6.1.3.1.2 Conformance requirement

If the UE considers the MAC code (supplied by the core network in the AUTN parameter) to be invalid, the UE shall send AUTHENTICATION AND CIPHERING FAILURE message with the reject cause 'MAC failure' to the System Simulator.

Reference

3G TS 24.008 clause 4.7.7

12.6.1.3.1.3 Test purpose

To test the behaviors of the UE, when the UE considers the MAC code (supplied by the core network in the AUTN parameter) to be invalid.

12.6.1.3.1.4 Method of test

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1, cell B in MCC1/MNC1/LAC1/RAC2.
Both cells are operating in network operation mode II.

The MAC (Message Authentication Code) code, which is included in AUTHENTICATION AND CIPHERING REQUEST, is invalid value.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

<u>Support of PS service</u>	<u>Yes/No</u>
<u>UE operation mode A</u>	<u>Yes/No</u>
<u>UE operation mode C</u>	<u>Yes/No</u>
<u>Switch off on button</u>	<u>Yes/No</u>
<u>Automatic PS attach procedure at switch on or power on</u>	<u>Yes/No</u>

Test procedure

A PS attach is performed, and the SS initiates an authentication and ciphering procedure.

The UE sends AUTHENTICATION AND CIPHERING FAILURE message with reject cause 'MAC failure' to the SS and starts timer T3214.

The SS initiates an identification procedure, upon receipt of a failure message with reject cause 'MAC failure'.

After the identification procedure is complete, the SS re-initiates an authentication and ciphering procedure.

T3360; set to 6 seconds.

T3318; set to 5 seconds.

T3319; set to 15 seconds.

Expected Sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u> <u>2</u>	<u>SS</u> <u>UE</u>			The following messages are sent and shall be received on cell A. The SS activates cell A. The UE is set in UE operation mode C (see ICS). If UE operation mode C is not supported, goto step 25.
<u>3</u> <u>4</u>	<u>UE</u>			The following messages are sent and shall be received on cell A.
<u>5</u>	<u>UE</u>			The UE is powered up or switched on and initiates an attach (see ICS).
<u>6</u>	<u>-></u>		<u>ATTACH REQUEST</u>	Attach type = 'PS attach' Mobility identity = IMSI
<u>7</u>	<u><-</u>		<u>AUTHENTICATION AND CIPHERING REQUEST</u>	Request authentication. Invalid Message Authentication Code (MAC).
<u>8</u> <u>9</u>	<u>SS</u> <u>-></u>		<u>AUTHENTICATION AND CIPHERING FAILURE</u>	The SS starts the timer T3360 GMM cause='MAC failure'
<u>10</u> <u>11</u> <u>12</u>	<u><-</u> <u>-></u> <u>SS</u>		<u>IDENTITY REQUEST</u> <u>IDENTITY RESPONSE</u>	Identity type = IMSI Mobile identity = IMSI
				The SS checks that the P-TMSI originally used in the authentication challenge corresponded to the correct IMSI.
<u>13</u>	<u><-</u>		<u>AUTHENTICATION AND CIPHERING REQUEST</u>	Request authentication.
<u>14</u>	<u>-></u>		<u>AUTHENTICATION AND CIPHERING RESPONSE</u>	RES
<u>15</u> <u>16</u>	<u>SS</u> <u><-</u>		<u>ATTACH ACCEPT</u>	The SS checks the RES value. Attach result = 'PS only attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature
<u>17</u>	<u>-></u>		<u>ATTACH COMPLETE</u>	Routing area identity = RAI-1
<u>18</u>	<u>SS</u>			The following messages are sent and shall be received on cell B. Activate cell B with a lower signal strength than cell A.
<u>19</u>	<u>-></u>		<u>ROUTING AREA UPDATING REQUEST</u>	RF level of cell A is lowered until cell B is preferred by the UE. Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 PS-CKSN-1
<u>20</u> <u>21</u>	<u>SS</u> <u><-</u>		<u>ROUTING AREA UPDATING ACCEPT</u>	The value of PS-CKSN is checked Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature
<u>22</u>	<u>-></u>		<u>ROUTING AREA UPDATING COMPLETE</u>	Routing area identity = RAI-2
<u>23</u>	<u>UE</u>			The UE is switched off or power is removed (see ICS).
<u>24</u>	<u>-></u>		<u>DETACH REQUEST</u>	Message is not sent if power is removed. Detach type = 'power switched off, PS detach'
<u>25</u>	<u>UE</u>			The UE is set in UE operation mode A (see ICS) and the test is repeated from step 1 to step 24.

12.6.1.3.1.5 Test requirements

UE shall:

- initiate a PS attach procedure with information element specified in the above Expected Sequence when UE is powered on or switched on.
- send an AUTHENTICATION AND CIPHERING FAILURE message with GMM cause 'MAC failure' to the SS
- start timer T3318.

After UE receives the IDENTITY REQUEST message from SS, UE shall:

- stop timer T3318, if running.
- send the IDENTITY RESPONSE message to SS
- start the timer T3319.

After UE receives the second AUTHENTICATION AND CIPHERING REQUEST message (containing a valid MAC) from SS, UE shall:

- send the AUTHENTICATION AND CIPHERING RESPONSE message to SS
- resume any retransmission timers (i.e. T3310, T3321, T3330 or T3317), if they are not already running.

12.6.1.3.2 GMM cause 'Synch failure'

12.6.1.3.2.1 Definition

12.6.1.3.2.2 Conformance requirement

If the UE considers the SQN (supplied by the core network in the AUTN parameter) to be out of range, the UE shall send AUTHENTICATION AND CIPHERING FAILURE message with the reject cause 'Synch failure' to the System Simulator.

Reference

3G TS 24.008 clause 4.7.7

12.6.1.3.2.3 Test purpose

To test the behaviors of the UE, when the UE considers the SQN (supplied by the core network in the AUTN parameter) to be out of range.

12.6.1.3.2.4 Method of test

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1, cell B in MCC1/MNC1/LAC1/RAC2.
Both cells are operating in network operation mode II.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

Support of PS service Yes/No

UE operation mode A Yes/No

UE operation mode C Yes/No

Switch off on button Yes/No

Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

A PS attach is performed, and the SS initiates an authentication and ciphering procedure.

UE sends AUTHENTICATION AND CIPHERING FAILURE message with reject cause 'synch failure' to the SS and starts timer T3214.

SS re-initiates an authentication and ciphering procedure.

T3360; set to 6 seconds.

T3320; set to 15 seconds.

Expected Sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u> <u>2</u>	<u>SS</u> <u>UE</u>			The following messages are sent and shall be received on cell A. The SS activates cell A. The UE is set in UE operation mode C (see ICS). If UE operation mode C is not supported, goto step 21. The following messages are sent and shall be received on cell A.
<u>3</u>	<u>UE</u>			The UE is powered up or switched on and initiates an attach (see ICS).
<u>4</u>	<u>-></u>		<u>ATTACH REQUEST</u>	Attach type = 'PS attach' Mobility identity = IMSI
<u>5</u>	<u><-</u>		<u>AUTHENTICATION AND CIPHERING REQUEST</u>	Request authentication. SQN is out of range.
<u>6</u> <u>7</u>	<u>SS</u> <u>-></u>		<u>AUTHENTICATION AND CIPHERING FAILURE</u>	The SS starts the timer T3360 GMM cause = 'Synch failure'
<u>8</u>	<u>SS</u>			AUTS parameter set new authentication vectors. (re-synchronisation)
<u>9</u>	<u><-</u>		<u>AUTHENTICATION AND CIPHERING REQUEST</u>	Request authentication.
<u>10</u>	<u>-></u>		<u>AUTHENTICATION AND CIPHERING RESPONSE</u>	RES
<u>11</u> <u>12</u>	<u>SS</u> <u><-</u>		<u>ATTACH ACCEPT</u>	The SS checks the RES value. Attach result = 'PS only attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature
<u>13</u>	<u>-></u>		<u>ATTACH COMPLETE</u>	Routing area identity = RAI-1
<u>14</u>	<u>SS</u>			The following messages are sent and shall be received on cell B. Activate cell B with lower signal strength than cell A. RF level of cell A is lowered until cell B is preferred by the UE.
<u>15</u>	<u>-></u>		<u>ROUTING AREA UPDATING REQUEST</u>	Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 PS-CKSN-1
<u>16</u> <u>17</u>	<u>SS</u> <u><-</u>		<u>ROUTING AREA UPDATING ACCEPT</u>	The value of PS-CKSN is checked Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature
<u>18</u>	<u>-></u>		<u>ROUTING AREA UPDATING COMPLETE</u>	Routing area identity = RAI-2
<u>19</u>	<u>UE</u>			The UE is switched off or power is removed (see ICS).
<u>20</u>	<u>-></u>		<u>DETACH REQUEST</u>	Message is not sent if power is removed. Detach type = 'power switched off, PS detach'
<u>21</u>	<u>UE</u>			The UE is set in UE operation mode A (see ICS) and the test is repeated from step 1 to step 20.

12.6.1.3.2.5 Test requirementsUE shall:

- initiate a PS attach procedure with information element specified in the above Expected Sequence when UE is powered on or switched on.
- send AUTHENTICATION AND CIPHERING FAILURE message with GMM cause 'synch failure' to the SS
- start timer T3320.

After UE receives the second AUTHENTICATION AND CIPHERING REQUEST message from SS, UE shall:

- stop timer T3320, if running.
- send AUTHENTICATION AND CIPHERING RESPONSE message to SS.

3GPP/T1 #8
Naantali, Finland, 31-01 Sep 2000

3GPP/T1S #12
Naantali, Finland, 28-30 Aug 2000

Document **T1-000210**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx
Document **T1S-000193r1**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 032

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here
↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source:

SONY

Date:

31/08/2000

Subject:

Correction of the 'Authentication rejected' test case

Work item:

Category:

F Correction ☒
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☐
D Editorial modification ☐

(only one category shall be marked with an X)

Release:

Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

Incorrect expected sequence should be corrected.
Some editorial mistakes have been corrected.

Clauses affected:

12.6.1.2

Other specs affected:

Other 3G core specifications ☐ → List of CRs:
Other GSM core specifications ☐ → List of CRs:
MS test specifications ☐ → List of CRs:
BSS test specifications ☐ → List of CRs:
O&M specifications ☐ → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

12.6.1.2 Authentication rejected

12.6.1.2.1 Definition

12.6.1.2.2 Conformance requirement

- 1) After reception of an Authentication Reject message the ~~User Equipment~~ UE shall:
 - 1.1 not perform normal routing area updating
 - 1.2 not perform periodic routing area updating
 - 1.3 not perform PS detach if switched off
- 2) The ~~User Equipment~~ UE shall delete the stored RAI, PS-CKSN P-TMSI and P-TMSI signature. USIM shall be considered invalid until power is switched off or USIM is removed.

Reference

3G TS 24.008 clauses 4.7.7

12.6.1.2.3 Test purpose

To test the behaviour of the UE if the network rejects the authentication and ciphering procedure.

12.6.1.2.4 Method of test

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1, cell B in MCC1/MNC1/LAC1/RAC2.
Both cells are operating in network operation mode II.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

Support of PS service	Yes/No
UE operation mode A	Yes/No
UE operation mode C	Yes/No
Switch off on button	Yes/No
Automatic PS attach procedure at switch on or power on	Yes/No

Test procedure

A PS attach is performed, and the SS rejects the authentication and ciphering procedure.

The SS checks that the UE does not perform normal routing area updating, does not perform periodic routing area updating and does not perform PS detach if switched off.

T3312; set to 10 minutes.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS	ATTACH REQUEST	The following messages are sent and shall be received on cell A. The SS activates cell A. The UE is set in UE operation mode C (see ICS). If UE operation mode C not supported, goto step 14. The UE is powered up or switched on and initiates an attach (see ICS). Attach type = 'PS attach' Mobile identity = IMSI
2		UE		
3		UE		
4		->		
5		<-	AUTHENTICATION AND CIPHERING REQUEST AUTHENTICATION AND CIPHERING ~~REJECT~~ <u>RESPONSE</u> <u>AUTHENTICATION AND CIPHERING REJECT</u>	Request authentication. Set PS-CKSN-1 <u>RES</u>
6		->		
<u>7</u>		<-		
~~7~~		<-		
<u>8</u>		<-	PAGING REQUEST TYPE 1	Mobile identity = IMSI Paging order is for TBF establishment. No response from the UE to the request. This is checked for 10 seconds.
~~8~~		<-		
<u>9</u>		UE		
<u>10</u>		SS		The following messages are sent and shall be received on cell B. Activate cell B with a lower signal strength than cell A. The RF level of cell A is lowered until cell B is preferred by the UE. No ROUTING AREA UPDATING REQUEST sent to the SS (SS waits 30 seconds). No periodic ROUTING AREA UPDATING REQUEST sent to the SS (SS waits T3310). The UE is switched off (see ICS). No DETACH REQUEST sent to the SS (SS waits 30 seconds).
~~10~~		UE		
<u>11</u>		UE		
~~11~~		UE		
<u>12</u>		UE		
~~12~~		UE		
<u>13</u>		SS		
~~13~~		SS		
<u>14</u>		UE		The UE is set in UE operation mode A (see ICS) and the test is repeated from step 1 to step 13.

12.6.1.2.5 Test requirements

UE shall:

- initiate a PS attach procedure with information elements specified in the above Expected Sequence when UE is powered on or switched on.

After UE ~~sends~~receives the AUTHENTICATION AND CIPHERING REJECT message, UE shall:

- not perform normal routing area updating when the RF level of the attached cell is lower than the RF level of the new cell.
- not perform a periodic routing area updating when the timer T3312 expires.
- not perform PS detach when UE is switched off.
- delete the stored RAI, PS-CKSN, P-TMSI and P-TMSI signature.
- consider the USIM as invalid until power is switched off or USIM is removed.

3GPP/T1 #8
Naantali, Finland, 31-01 Sep 2000

3GPP/T1S #12
Naantali, Finland, 28-30 Aug 2000

Document **T1-000211**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx
Document **T1S-000194r1**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR 024

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T1#8**
list expected approval meeting # here
↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source:

SONY

Date:

31/08/2000

Subject:

Modification to the test case for Routing area updating.

Work item:

Category:

(only one category shall be marked with an X)

F Correction ☐
A Corresponds to a correction in an earlier release ☐
B Addition of feature ☐
C Functional modification of feature ☒
D Editorial modification ☐

Release:

Phase 2 ☐
Release 96 ☐
Release 97 ☐
Release 98 ☐
Release 99 ☒
Release 00 ☐

Reason for change:

It is necessary to modify the test case of the Routing area updating, in order to keep consistency with the change of the core specification.

Some editorial mistakes have been corrected.

Clauses affected:

12.4.1.5

Other specs affected:

Other 3G core specifications ☐
Other GSM core specifications ☐
MS test specifications ☐
BSS test specifications ☐
O&M specifications ☐

→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

12.4.1.5 Routing area updating / abnormal cases / attempt counter check / miscellaneous reject causes

12.4.1.5.1 Definition

12.4.1.5.2 Conformance requirement

- 1) When a routing area updating procedure is rejected with the attempt counter less than five, the ~~User Equipment~~UE shall repeat the routing area updating procedure after T3330 timeout.
- 2) When a T3330 timeout has occurred during a routing area updating procedure with the attempt counter five, the ~~User Equipment~~UE shall start timer T3302.
- 3) When the T3302 expire, a new routing area updating procedure shall be initiated.

GMM cause codes that can be selected are:

‘IMSI unknown in HLR’

‘IMEI not accepted’

‘Illegal ME’

‘UE identity cannot be derived by the network’

‘Network failure’

‘Congestion’

‘retry upon entry into a new cell’

‘Semantically incorrect message’

‘Invalid mandatory information’

‘Message type non-existent or not implemented’

‘Message type not compatible with the protocol state’

‘Information element non-existent or not implemented’

‘Conditional IE error’

‘Message not compatible with the protocol state’

‘Protocol error, unspecified’

Reference

3G TS 24.008 clause 4.7.5.1

12.4.1.5.3 Test purpose

To test the behaviour of the UE with respect to the attempt counter.

12.4.1.5.4 Method of test

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1, cell B in MCC1/MNC1/LAC1/RAC2.

Both cells are operating in network operation mode II (in case of UE operation mode A), or in network operation mode III (in case of UE operation mode C).

User Equipment:

The UE has a valid P-TMSI-1, P-TMSI-1 signature and RAI-1.

Related ICS/IXIT statements

Support of PS service	Yes/No
UE operation mode C	Yes/No
UE operation mode A	Yes/No (only if mode C not supported)
Switch off on button	Yes/No
Automatic PS attach procedure at switch on or power on	Yes/No

Test procedure

The UE initiates a routing area updating procedure (attempt counter zero).

The SS rejects the routing area updating procedure with a random cause code.

The UE initiates a new routing area updating procedure (attempt counter one) after T3311 expires.

The SS rejects the routing area updating procedure with a random cause code.

The UE initiates a new routing area updating procedure (attempt counter two) after T3311 expires.

The SS rejects the routing area updating procedure with a random cause code.

The UE initiates a new routing area updating procedure (attempt counter three) after T3311 expires.

The SS rejects the routing area updating procedure with a random cause code.

The UE initiates a new routing area updating procedure (attempt counter four) after T3311 expires.

The SS rejects the routing area updating procedure with a random cause code.

The UE initiates a new routing area updating procedure with attempt counter five (after T3311 expires).

The SS rejects the routing area updating procedure with a random cause code.

The UE shall not perform a new successful routing area updating procedure after T3311 seconds.

The UE initiates a routing area updating procedure with attempt counter zero after T3302 expires with the stored P-TMSI, P-TMSI signature, PS CKSN and RAI.

T3302; set to 10 minutes.

T3330; 15 seconds.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	SS			The following messages are sent and shall be received on cell A. The UE is set in UE operation mode C or B (see ICS). The SS is set in network operation mode II or III and activates cell A. The UE is powered up or switched on and initiates an attach (see ICS). Cell A is preferred by the UE. Attach type = 'PS attach' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-1 No new mobile identity assigned. P-TMSI not included. Attach result = 'PS only attached' P-TMSI-2 signature Routing area identity = RAI-1
2	UE			
3	SS			
4	->		ATTACH REQUEST	
5	<-		ATTACH ACCEPT	
6	SS			The following messages are sent and shall be received on cell B. The SS deactivates cell A and activates cell B. Cell B is preferred by the UE. Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 Random GMM cause The SS verifies that the time between the routing area updating requests is 15 seconds Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 Random GMM cause The SS verifies that the time between the routing area updating requests is 15 seconds Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 Random GMM cause The SS verifies that the time between the routing area updating requests is 15 seconds Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 Random GMM cause The SS verifies that the time between the routing area updating requests is 15 seconds Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 Random GMM cause The SS verifies that the UE does not attempt to attach for 10 minutes . <u>The SS shall release the PS signalling connection.</u> Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1
7	SS			
8	->		ROUTING AREA UPDATING REQUEST	
9	<-		ROUTING AREA UPDATING REJECT	
10	SS			
11	->		ROUTING AREA UPDATING REQUEST	
12	<-		ROUTING AREA UPDATING REJECT	
13	SS			
14	->		ROUTING AREA UPDATING REQUEST	
15	<-		ROUTING AREA UPDATING REJECT	
16	SS			
17	->		ROUTING AREA UPDATING REQUEST	
18	<-		ROUTING AREA UPDATING REJECT	
19	SS			
20	->		ROUTING AREA UPDATING REQUEST	
21	<-		ROUTING AREA UPDATING REJECT	
22	SS			
<u>23</u>	<u>SS</u>			
<u>23</u> <u>24</u>	->		ROUTING AREA UPDATING REQUEST	

<u>2425</u>	<-	ROUTING AREA UPDATING ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-2 P-TMSI-3 signature Routing area identity = RAI-4
<u>2526</u>	->	ROUTING AREA UPDATING COMPLETE	
<u>2627</u>	UE		The UE is switched off or power is removed (see ICS).
<u>2728</u>	->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'

12.4.1.5.5 Test requirements

UE shall:

- initiate a PS attach procedure with the information elements specified in the above Expected Sequence when UE is powered up or switched on.

After completing the PS attach procedure, UE shall :

- perform the following actions depending on the conditions described below.

Case 1) A routing area updating procedure is rejected from SS with the attempt counter less than five

UE shall:

- repeat the routing area updating procedure after T3330 timeout

Case2) A timer T3330 timeout has occurred during a routing area updating procedure with the attempt counter five

UE shall:

- start timer T3302

Case3) The T3302 expires

UE shall:

- initiate a new routing area updating procedure

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

34.123-1 CR

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **T#9**
list expected approval meeting # here ↑

for approval ☒
for information ☐

strategic ☐
non-strategic ☐ (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:
(at least one should be marked with an X)

(U)SIM ☐ ME ☒ UTRAN / Radio ☐ Core Network ☐

Source: Ericsson

Date: 30 August 2000

Subject: Update of radio bearer test cases

Work item:

Category:

(only one category shall be marked with an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

☒
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Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

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Reason for change:

TS 34.108 have been updated based on GSMA ISG document "Typical Radio Interface Parameter Sets" version1.3.

The present CR updates the radio bearer test cases according to the changes introduced in TS 34.108.

The present CR also adds details to test cases used for testing of "Streaming/unknown" reference radio bearer configurations (test cases 14.2.15 to 14.2.22)

Clauses affected: 14.2.4 to 14.2.55, 14.3.1 to 14.3.6, 14.4.2, 14.4.3 and 14.5.1

Other specs affected:

Other 3G core specifications	☐	→ List of CRs:
Other GSM core specifications	☐	→ List of CRs:
MS test specifications	☐	→ List of CRs:
BSS test specifications	☐	→ List of CRs:
O&M specifications	☐	→ List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

14 Radio Bearer Services

14.1 General information for radio bearer tests

The role of radio bearer services is to cover all aspects of the radio interface transport. TS 34.108, clause 6.10 specifies reference radio bearer configurations to be tested.

The applicability of radio bearer tests is dependent on the UE uplink and downlink radio access capabilities and UE support tele- and bearer-services. See TS 34.123-2, Annex B for applicability of the specific test cases.

14.1.1 UE radio bearer test mode activation procedure

The Radio Bearer Test Mode Activation procedure is used to get UE in the state for radio bearer testing using the radio bearer setup configurations as specified in TS 34.108, clause 6.10.

Step	Direction		Message	Comments
	UE	SS		
1	<--		SYSTEM INFORMATION (BCCH)	Broadcast
2	<--		PAGING (PCCH)	Paging
3	-->		RRC CONNECTION REQUEST (CCCH)	RRC
4	<--		RRC CONNECTION SETUP (CCCH)	RRC
5	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
7	-->		PAGING RESPONSE (DCCH)	RR
8	<--		ACTIVATE RB TEST MODE (DCCH)	TC
9	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
10	<--		RADIO BEARER SETUP (DCCH)	RRC
11	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC

14.2 Combinations on DPCH

14.2.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

Implicitly tested

14.2.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

Implicitly tested

14.2.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

Implicitly tested

14.2.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.4.1 Conformance requirement

The UE shall be able to establish the UTRAN requested radio bearers within the UE's signaled radio access capabilities be able to establish the UTRAN requested radio bearers.

The UE shall correctly transfer user data from peer to peer RLC entities according to the requested radio bearer configuration.

Reference(s)

3GPP TS 25.331, clause 8.2.1

3GPP TS 25.2xx series (Physical Layer)

3GPP TS 25.321 (MAC)

3GPP TS 25.322 (RLC)

14.2.4.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.4.

14.2.4.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>RAB subflow #3</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x81(alt. 1x0)</u>	<u>0x103</u>	<u>0x60</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x103</u>	<u>1x60</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x81</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0, TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0, TF0, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF1, TF1, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF0, TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF0, TF0, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1, TF1, TF1)</u>

Downlink TFS:

		<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>RAB subflow #3</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>	<u>0x103</u>	<u>0x60</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x103</u>	<u>1x60</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x81</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0, TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0, TF0, TF0)</u>
<u>DL TFC2</u>	<u>(TF2, TF1, TF1, TF0)</u>
<u>DL TFC3</u>	<u>(TF0, TF0, TF0, TF1)</u>
<u>DL TFC4</u>	<u>(TF1, TF0, TF0, TF1)</u>
<u>DL TFC5</u>	<u>(TF2, TF1, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL TFC1</u>	<u>UL TFC1</u>	<u>DL TFC0, DL TFC3, UL TFC0, UL TFC3</u>
<u>2</u>	<u>DL TFC2</u>	<u>UL TFC2</u>	<u>DL TFC0, DL TFC5, UL TFC0, UL TFC5</u>

Initial conditions

UE in idle mode

Test procedure

Sub test 1:

- The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.4 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC1, UL TFC3} {(TF0,TF0),(TF1,TF1)} for RAB subflow#1, RAB subflow#2 and RAB subflow#3 using the RRC transport format combination control procedure.
- The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 3984 bits for RAB subflow#1, 103 bits for RAB subflow#2 and to 60 bits for RAB subflow#3.
- The SS transmits an RLC SDU of size 3984 bits on RAB subflow#1 using transport format TF1, an RLC SDU of size 103 bits on RAB subflow#2 using transport format TF1 and an RLC SDU of size 60 bits on RAB subflow#3 using transport format combination DL TFC1. No data is transmitted on RAB subflow#2 and RAB subflow#3.
- The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1, RAB subflow#2 and RAB subflow#3 have has the correct content and is are received having the correct transport format. The SS checks that no data is received on RAB subflow#2 or RAB subflow#3.

f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC2, UL_TFC5}, {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 8139 bits for RAB subflow#1, 103 bits for RAB subflow#2 and to 60 bits for RAB subflow#3.
- i) The SS transmits an RLC SDU of size 8139 bits on RAB subflow#1, an RLC SDU of size 103 bits on RAB subflow#2 and an RLC SDU of size 60 bits on RAB subflow#3 using transport format combination DL_TFC2~~TF4~~.
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1, RAB subflow#2 and RAB subflow#3 ~~has~~have the correct content and ~~are~~is received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: <u>{UL_TFC0, UL_TFC1, UL_TFC3}</u> ~~RAB#1: (TF0,TF0), (TF1,TF1)~~ ~~RAB#2: (TF0,TF0), (TF1,TF1)~~ ~~RAB#3: (TF0,TF0), (TF1,TF1)~~
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = ~~3984~~ bits RAB#2: UL RLC SDU size = 103 bits RAB#3: UL RLC SDU size = 60 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	<u>DL_TFC1:</u> <u>RAB#1: 39 bits (TF1=1x39 bits)</u> <u>RAB#2: 0 bits (TF0=0x103 bits)</u> <u>RAB#3: 0 bits (TF0=0x60 bits)</u> ~~RAB#1: 81 bit (TF1)~~ ~~RAB#2: 103 bit (TF1)~~ ~~RAB#3: 60 bit (TF1)~~
6	→		UPLINK RLC SDU	<u>UL_TFC1:</u> <u>RAB#1: 39 bits (TF1=1x39 bits)</u> <u>RAB#2: 0 bits (TF0=0x103 bits)</u> <u>RAB#3: 0 bits (TF0=0x60 bits)</u> ~~RAB#1: 81 bit (TF1)~~ ~~RAB#2: 103 bit (TF1)~~ ~~RAB#3: 60 bit (TF1)~~
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for ~~RAB subflow#1~~ is limited to <u>{UL_TFC0,</u> <u>UL_TFC2, UL_TFC5}</u> ; ~~(TF0,TF0),(TF2,TF2)~~
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = ~~8139~~ bits RAB#2: UL RLC SDU size = 103 bits RAB#3: UL RLC SDU size = 60 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	<u>DL_TFC2:</u> <u>RAB#1: 39 bits (TF2=1x39 bits)</u> <u>RAB#2: 103 bits (TF1=1x103 bits)</u> <u>RAB#3: 60 bits (TF1=1x60 bits)</u> ~~RAB #1: 39 bit (TF2)~~
13	→		UPLINK RLC SDU	<u>UL_TFC2:</u> <u>RAB#1: 39 bits (TF2=1x39 bits)</u> <u>RAB#2: 103 bits (TF1=1x103 bits)</u> <u>RAB#3: 60 bits (TF1=1x60 bits)</u> ~~RAB#1: 39 (TF2)~~
14	←		OPEN UE TEST LOOP	Optional step
15	→		OPEN UE TEST LOOP COMPLETE	Optional step
164			RB RELEASE	Optional step

14.2.4.4 Test requirements

- At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 6 the UE transmitted transport format shall be
 - TF1 (1x~~3984~~) for RAB subflow#1; and
 - TF1 (1x103) for RAB subflow#2; and
 - TF1 (1x60) for RAB subflow#3.

3. At step 6 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- no data shall be received on RAB subflow#2 or RAB subflow#3.
- ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS; and~~
- ~~— an RLC SDU on RAB subflow#3 with the same content as sent by SS.~~

4. At step 13 the UE transmitted transport format shall be

- TF2 (1x8139) for RAB subflow#1; and
- TF1 (1x103) for RAB subflow#2; and
- TF1 (1x60) for RAB subflow#3.

5. At step 13 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#2 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#3 with the same content as sent by SS.

14.2.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.5.1 Conformance requirement

See 14.2.4.1.

14.2.5.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.5.

14.2.5.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>RAB subflow #3</u>	<u>DCCH</u>
TFS	<u>TF0, bits</u>	<u>0x65(alt. 1x0)</u>	<u>0x99</u>	<u>0x40</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x99</u>	<u>1x40</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x65</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0, TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0, TF0, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF1, TF1, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF0, TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF0, TF0, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1, TF1, TF1)</u>

Downlink TFS:

		RAB subflow #1	RAB subflow #2	RAB subflow #3	DCCH
TFS	TF0, bits	1x0	0x99	0x40	0x148
	TF1, bits	1x39	1x99	1x40	1x148
	TF2, bits	1x65	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS under test	Implicitely tested
<u>1</u>	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3
<u>2</u>	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5

Initial conditions

UE in idle mode

Test procedureSub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.5 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC3} using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1, 99 bits for RAB subflow#2 and to 40 bits for RAB subflow#3.
- d) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1, using transport format combination DL_TFC1. No data is transmitted on RAB subflow#2 and RAB subflow#3.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. The SS checks that no data is received on RAB subflow#2 or RAB subflow#3.
- f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC2, UL_TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 65 bits for RAB subflow#1, 99 bits for RAB subflow#2 and to 40 bits for RAB subflow#3.
- i) The SS transmits an RLC SDU of size 65 bits on RAB subflow#1, an RLC SDU of size 99 bits on RAB subflow#2 and an RLC SDU of size 40 bits on RAB subflow#3 using transport format combination DL_TFC2.

- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1, RAB subflow#2 and RAB subflow#3 have the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.
- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.5 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1, RAB subflow#2 and RAB subflow#3 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 65 bits for RAB subflow#1, 99 bits for RAB subflow#2 and to 40 bits for RAB subflow#3.~~
- ~~d) The SS transmits an RLC SDU of size 65 bits on RAB subflow#1 using transport format TF1, an RLC SDU of size 99 bits on RAB subflow#2 using transport format TF1 and an RLC SDU of size 40 bits on RAB subflow#3.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1, RAB subflow#2 and RAB subflow#3 have the correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1 using transport format TF1.~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format.~~
- ~~k) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL TFC0, UL TFC1, UL TFC3}
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits RAB#2: UL RLC SDU size = 99 bits RAB#3: UL RLC SDU size = 40 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	DL TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=1x99 bits) RAB#3: 0 bits (TF0=1x40 bits)
6	→		UPLINK RLC SDU	UL TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=1x99 bits) RAB#3: 0 bits (TF0=1x40 bits)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL TFC0, UL TFC2, UL TFC5}
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 65 bits RAB#2: UL RLC SDU size = 99 bits RAB#3: UL RLC SDU size = 40 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	DL TFC2: RAB#1: 65 bits (TF2=1x65 bits) RAB#2: 99 bits (TF1=1x99 bits) RAB#3: 40 bits (TF1=1x40 bits)
13	→		UPLINK RLC SDU	UL TFC2: RAB#1: 65 bits (TF2=1x65 bits) RAB#2: 99 bits (TF1=1x99 bits) RAB#3: 40 bits (TF1=1x40 bits)
14	←		OPEN UE TEST LOOP	Optional step
15	→		OPEN UE TEST LOOP COMPLETE	Optional step
16			RB RELEASE	Optional step
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: RAB#1: (TF0,TF0), (TF1,TF1) RAB#2: (TF0,TF0), (TF1,TF1) RAB#3: (TF0,TF0), (TF1,TF1)
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 65 bits RAB#2: UL RLC SDU size = 99 bits RAB#3: UL RLC SDU size = 40 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	RAB#1: 65 bit (TF1) RAB#2: 99 bit (TF1) RAB#3: 40 bit (TF1)
6	→		UPLINK RLC SDU	RAB#1: 65 bit (TF1) RAB#2: 99 bit (TF1) RAB#3: 40 bit (TF1)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for RAB subflow#1 is limited to: (TF0,TF0),(TF2,TF2)
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	RAB #1: 39 bit (TF2)
13	→		UPLINK RLC SDU	RAB#1: 39 (TF2)
14			RB RELEASE	Optional step

14.2.5.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE transmitted transport format shall be
 - TF1 (1x39) for RAB subflow#1.
3. At step 6 the UE shall return
 - an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
 - no data shall be received on RAB subflow#2 or RAB subflow#3.
4. At step 13 the UE transmitted transport format shall be
 - TF2 (1x65) for RAB subflow#1; and
 - TF1 (1x99) for RAB subflow#2; and
 - TF1 (1x40) for RAB subflow#3.
5. At step 13 the UE shall return
 - an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
 - an RLC SDU on RAB subflow#2 with the same content as sent by SS; and
 - an RLC SDU on RAB subflow#3 with the same content as sent by SS.
- ~~2. At step 6 the UE transmitted transport format shall be~~
 - ~~— TF1 (1x65) for RAB subflow#1; and~~
 - ~~— TF1 (1x99) for RAB subflow#2; and~~
 - ~~— TF1 (1x40) for RAB subflow#3.~~
- ~~3. At step 6 the UE shall return~~
 - ~~— an RLC SDU on RAB subflow#1 with the same content as sent by SS; and~~
 - ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS; and~~
 - ~~— an RLC SDU on RAB subflow#3 with the same content as sent by SS.~~
- ~~4. At step 13 the UE transmitted transport format shall TF2 (1x39) for RAB subflow#1.~~
- ~~5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.~~

14.2.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.6.1 Conformance requirement

See 14.2.4.1.

14.2.6.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.6.

14.2.6.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x75 (alt. 1x0)</u>	<u>0x84</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x84</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x75</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>UL_TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>UL_TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>UL_TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>UL_TFC5</u>	<u>(TF2, TF1, TF1)</u>

Downlink TFS:

		<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>	<u>0x84</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x84</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x75</u>	<u>N/A</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>DL_TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>DL_TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>DL_TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>DL_TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>DL_TFC5</u>	<u>(TF2, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL_TFC1</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3</u>
<u>2</u>	<u>DL_TFC2</u>	<u>UL_TFC2</u>	<u>DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5</u>

Initial conditions

UE in idle mode

Test procedure

Sub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.6 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC3} using the RRC transport format combination control procedure.

- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1 and 84 bits for RAB subflow#2.
- d) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1, using transport format combination DL TFC1. No data is transmitted on RAB subflow#2.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. The SS checks that no data is received on RAB subflow#2.
- f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC2, UL TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 75 bits for RAB subflow#1 and 84 bits for RAB subflow#2.
- i) The SS transmits an RLC SDU of size 75 bits on RAB subflow#1 and an RLC SDU of size 84 bits on RAB subflow#2 using transport format combination DL TFC2.
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.
- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.6 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 and RAB subflow#2 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 75 bits for RAB subflow#1 and to 84 bits for RAB subflow#2.~~
- ~~d) The SS transmits an RLC SDU of size 75 bits on RAB subflow#1 using transport format TF1 and an RLC SDU of size 84 bits using transport format TF1.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1 using transport format TF1.~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format.~~
- ~~k) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction UE SS	Message	Comments
1		UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC3}
3	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits RAB#2: UL RLC SDU size = 84 bits
4	→	CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←	DOWNLINK RLC SDU	DL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x84 bits)
6	→	UPLINK RLC SDU	UL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x84 bits)
7	←	OPEN UE TEST LOOP	
8	→	OPEN UE TEST LOOP COMPLETE	
9	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC2, UL_TFC5}
10	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 75 bits RAB#2: UL RLC SDU size = 84 bits
11	→	CLOSE UE TEST LOOP COMPLETE	TC
12	←	DOWNLINK RLC SDU	DL_TFC2: RAB#1: 75 bits (TF2=1x75 bits) RAB#2: 84 bits (TF1=1x84 bits)
13	→	UPLINK RLC SDU	UL_TFC2: RAB#1: 75 bits (TF2=1x75 bits) RAB#2: 84 bits (TF1=1x84 bits)
14	←	OPEN UE TEST LOOP	Optional step
15	→	OPEN UE TEST LOOP COMPLETE	Optional step
16		RB RELEASE	Optional step
2	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: RAB#1: (TF0,TF0), (TF1,TF1) RAB#2: (TF0,TF0), (TF1,TF1)
3	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 75 bits RAB#2: UL RLC SDU size = 84 bits
4	→	CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←	DOWNLINK RLC SDU	RAB#1: 75 bit (TF1) RAB#2: 84 bit (TF1)
6	→	UPLINK RLC SDU	RAB#1: 75 bit (TF1) RAB#2: 84 bit (TF1)
7	←	OPEN UE TEST LOOP	
8	→	OPEN UE TEST LOOP COMPLETE	
9	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for RAB subflow#1 is limited to: (TF0,TF0),(TF2,TF2)
10	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits
11	→	CLOSE UE TEST LOOP COMPLETE	TC
12	←	DOWNLINK RLC SDU	RAB #1: 39 bit (TF2)
13	→	UPLINK RLC SDU	RAB#1: 39 (TF2)
14		RB RELEASE	Optional step

14.2.6.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 6 the UE transmitted transport format shall be

- TF1 (1x39) for RAB subflow#1.

3. At step 6 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- no data shall be received on RAB subflow#2.

4. At step 13 the UE transmitted transport format shall be

- TF2 (1x75) for RAB subflow#1; and
- TF1 (1x84) for RAB subflow#2.

5. At step 13 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#2 with the same content as sent by SS.

~~2. At step 6 the UE transmitted transport format shall be~~

- ~~— TF1 (1x75) for RAB subflow#1; and~~
- ~~— TF1 (1x84) for RAB subflow#2.~~

~~3. At step 6 the UE shall return~~

- ~~— an RLC SDU on RAB subflow#1 with the same content as sent by SS; and~~
- ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS.~~

~~4. At step 13 the UE transmitted transport format shall TF2 (1x39) for RAB subflow#1.~~

~~5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.~~

14.2.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.7.1 Conformance requirement

See 14.2.4.1.

14.2.7.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.7.

14.2.7.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x61 (alt. 1x0)</u>	<u>0x87</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x87</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x61</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Downlink TFS:

		<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>	<u>0x87</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x87</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x61</u>	<u>N/A</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>DL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>DL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>DL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>DL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL TFC1</u>	<u>UL TFC1</u>	<u>DL TFC0, DL TFC3, UL TFC0, UL TFC3</u>
<u>2</u>	<u>DL TFC2</u>	<u>UL TFC2</u>	<u>DL TFC0, DL TFC5, UL TFC0, UL TFC5</u>

Initial conditions

UE in idle mode

Test procedure

Sub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.7 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC1, UL TFC3} using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1 and 87 bits for RAB subflow#2.
- d) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1, using transport format combination DL TFC1. No data is transmitted on RAB subflow#2.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. The SS checks that no data is received on RAB subflow#2.
- f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC2, UL TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 61 bits for RAB subflow#1 and 87 bits for RAB subflow#2.
- i) The SS transmits an RLC SDU of size 61 bits on RAB subflow#1 and an RLC SDU of size 87 bits on RAB subflow#2 using transport format combination DL TFC2.
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.
- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.7 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 and RAB subflow#2 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 61 bits for RAB subflow#1 and to 87 bits for RAB subflow#2.~~
- ~~d) The SS transmits an RLC SDU of size 61 bits on RAB subflow#1 using transport format TF1 and an RLC SDU of size 87 bits using transport format TF1.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1 using transport format TF1.~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format.~~
- ~~k) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction UE SS	Message	Comments
1		UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC3}
3	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits RAB#2: UL RLC SDU size = 87 bits
4	→	CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←	DOWNLINK RLC SDU	DL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x87 bits)
6	→	UPLINK RLC SDU	UL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x87 bits)
7	←	OPEN UE TEST LOOP	
8	→	OPEN UE TEST LOOP COMPLETE	
9	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC2, UL_TFC5}
10	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 61 bits RAB#2: UL RLC SDU size = 87 bits
11	→	CLOSE UE TEST LOOP COMPLETE	TC
12	←	DOWNLINK RLC SDU	DL_TFC2: RAB#1: 61 bits (TF2=1x61 bits) RAB#2: 87 bits (TF1=1x87 bits)
13	→	UPLINK RLC SDU	UL_TFC2: RAB#1: 61 bits (TF2=1x61 bits) RAB#2: 87 bits (TF1=1x87 bits)
14	←	OPEN UE TEST LOOP	Optional step
15	→	OPEN UE TEST LOOP COMPLETE	Optional step
16		RB RELEASE	Optional step
2	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: RAB#1: (TF0,TF0), (TF1,TF1) RAB#2: (TF0,TF0), (TF1,TF1)
3	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 61 bits RAB#2: UL RLC SDU size = 87 bits
4	→	CLOSE UE TEST LOOP COMPLETE (DCCH)	S
5	←	DOWNLINK RLC SDU	RAB#1: 61 bit (TF1) RAB#2: 87 bit (TF1)
6	→	UPLINK RLC SDU	RAB#1: 61 bit (TF1) RAB#2: 87 bit (TF1)
7	←	OPEN UE TEST LOOP	
8	→	OPEN UE TEST LOOP COMPLETE	
9	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for RAB subflow#1 is limited to: (TF0,TF0),(TF2,TF2)
10	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits
11	→	CLOSE UE TEST LOOP COMPLETE	TC
12	←	DOWNLINK RLC SDU	RAB #1: 39 bit (TF2)
13	→	UPLINK RLC SDU	RAB#1: 39 (TF2)
14		RB RELEASE	Optional step

14.2.7.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 6 the UE transmitted transport format shall be

- TF1 (1x39) for RAB subflow#1.

3. At step 6 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- no data shall be received on RAB subflow#2.

4. At step 13 the UE transmitted transport format shall be

- TF2 (1x61) for RAB subflow#1; and
- TF1 (1x87) for RAB subflow#2.

5. At step 13 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#2 with the same content as sent by SS.

~~2. At step 6 the UE transmitted transport format shall be~~

- ~~— TF1 (1x61) for RAB subflow#1; and~~
- ~~— TF1 (1x87) for RAB subflow#2.~~

~~3. At step 6 the UE shall return~~

- ~~— an RLC SDU on RAB subflow#1 with the same content as sent by SS; and~~
- ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS.~~

~~4. At step 13 the UE transmitted transport format shall TF2 (1x39) for RAB subflow#1.~~

~~5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.~~

14.2.8 Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.8.1 Conformance requirement

See 14.2.4.1.

14.2.8.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.8.

14.2.8.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x58 (alt. 1x0)</u>	<u>0x76</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x76</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x58</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Downlink TFS:

		<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>	<u>0x76</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x76</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x58</u>	<u>N/A</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>DL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>DL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>DL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>DL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL TFC1</u>	<u>UL TFC1</u>	<u>DL TFC0, DL TFC3, UL TFC0, UL TFC3</u>
<u>2</u>	<u>DL TFC2</u>	<u>UL TFC2</u>	<u>DL TFC0, DL TFC5, UL TFC0, UL TFC5</u>

Initial conditions

UE in idle mode

Test procedure

Sub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.8 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC1, UL TFC3} using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1 and 76 bits for RAB subflow#2.
- d) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1, using transport format combination DL TFC1. No data is transmitted on RAB subflow#2.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. The SS checks that no data is received on RAB subflow#2.
- f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC2, UL TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 58 bits for RAB subflow#1 and 76 bits for RAB subflow#2.
- i) The SS transmits an RLC SDU of size 58 bits on RAB subflow#1 and an RLC SDU of size 76 bits on RAB subflow#2 using transport format combination DL TFC2.
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.
- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.8 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 and RAB subflow#2 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 58 bits for RAB subflow#1 and to 76 bits for RAB subflow#2.~~
- ~~d) The SS transmits an RLC SDU of size 58 bits on RAB subflow#1 using transport format TF1 and an RLC SDU of size 76 bits using transport format TF1.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1 using transport format TF1.~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format.~~
- ~~k) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction UE SS	Message	Comments
1		UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL TFC0, UL TFC1, UL TFC3}
3	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits RAB#2: UL RLC SDU size = 76 bits
4	→	CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←	DOWNLINK RLC SDU	DL TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=1x76 bits)
6	→	UPLINK RLC SDU	UL TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=1x76 bits)
7	←	OPEN UE TEST LOOP	
8	→	OPEN UE TEST LOOP COMPLETE	
9	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL TFC0, UL TFC2, UL TFC5}
10	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 58 bits RAB#2: UL RLC SDU size = 76 bits
11	→	CLOSE UE TEST LOOP COMPLETE	TC
12	←	DOWNLINK RLC SDU	DL TFC2: RAB#1: 58 bits (TF2=1x58 bits) RAB#2: 76 bits (TF1=1x76 bits)
13	→	UPLINK RLC SDU	UL TFC2: RAB#1: 58 bits (TF2=1x58 bits) RAB#2: 76 bits (TF1=1x76 bits)
14	←	OPEN UE TEST LOOP	Optional step
15	→	OPEN UE TEST LOOP COMPLETE	Optional step
16		RB RELEASE	Optional step
2	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: RAB#1: (TF0,TF0), (TF1,TF1) RAB#2: (TF0,TF0), (TF1,TF1)
3	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 58 bits RAB#2: UL RLC SDU size = 76 bits
4	→	CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←	DOWNLINK RLC SDU	RAB#1: 58 bit (TF1) RAB#2: 76 bit (TF1)
6	→	UPLINK RLC SDU	RAB#1: 58 bit (TF1) RAB#2: 76 bit (TF1)
7	←	OPEN UE TEST LOOP	
8	→	OPEN UE TEST LOOP COMPLETE	
9	←	TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for RAB subflow#1 is limited to: (TF0,TF0),(TF2,TF2)
10	←	CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits
11	→	CLOSE UE TEST LOOP COMPLETE	TC
12	←	DOWNLINK RLC SDU	RAB #1: 39 bit (TF2)
13	→	UPLINK RLC SDU	RAB#1: 39 (TF2)
14		RB RELEASE	Optional step

14.2.8.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 6 the UE transmitted transport format shall be

- TF1 (1x39) for RAB subflow#1.

3. At step 6 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- no data shall be received on RAB subflow#2.

4. At step 13 the UE transmitted transport format shall be

- TF2 (1x58) for RAB subflow#1; and
- TF1 (1x76) for RAB subflow#2.

5. At step 13 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#2 with the same content as sent by SS.

~~2. At step 6 the UE transmitted transport format shall be~~

- ~~— TF1 (1x58) for RAB subflow#1; and~~
- ~~— TF1 (1x76) for RAB subflow#2.~~

~~3. At step 6 the UE shall return~~

- ~~— an RLC SDU on RAB subflow#1 with the same content as sent by SS; and~~
- ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS.~~

~~4. At step 13 the UE transmitted transport format shall TF2 (1x39) for RAB subflow#1.~~

~~5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.~~

14.2.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.9.1 Conformance requirement

See 14.2.4.1.

14.2.9.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.9.

14.2.9.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x55 (alt. 1x0)</u>	<u>0x63</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x63</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x55</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Downlink TFS:

		<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>	<u>0x63</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x63</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x55</u>	<u>N/A</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>DL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>DL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>DL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>DL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL TFC1</u>	<u>UL TFC1</u>	<u>DL TFC0, DL TFC3, UL TFC0, UL TFC3</u>
<u>2</u>	<u>DL TFC2</u>	<u>UL TFC2</u>	<u>DL TFC0, DL TFC5, UL TFC0, UL TFC5</u>

Initial conditions

UE in idle mode

Test procedure

Sub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.9 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC1, UL TFC3} using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1 and 63 bits for RAB subflow#2.
- d) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1, using transport format combination DL TFC1. No data is transmitted on RAB subflow#2.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. The SS checks that no data is received on RAB subflow#2.
- f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC2, UL TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 55 bits for RAB subflow#1 and 63 bits for RAB subflow#2.
- i) The SS transmits an RLC SDU of size 55 bits on RAB subflow#1 and an RLC SDU of size 63 bits on RAB subflow#2 using transport format combination DL TFC2.
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.
- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.9 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 and RAB subflow#2 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 55 bits for RAB subflow#1 and to 63 bits for RAB subflow#2.~~
- ~~d) The SS transmits an RLC SDU of size 55 bits on RAB subflow#1 using transport format TF1 and an RLC SDU of size 63 bits using transport format TF1.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1 using transport format TF1.~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format.~~
- ~~k) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC3}
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits RAB#2: UL RLC SDU size = 63 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	DL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x63 bits)
6	→		UPLINK RLC SDU	UL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x63 bits)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC2, UL_TFC5}
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 55 bits RAB#2: UL RLC SDU size = 63 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	DL_TFC2: RAB#1: 55 bits (TF2=1x55 bits) RAB#2: 63 bits (TF1=1x63 bits)
13	→		UPLINK RLC SDU	UL_TFC2: RAB#1: 55 bits (TF2=1x55 bits) RAB#2: 63 bits (TF1=1x63 bits)
14	←		OPEN UE TEST LOOP	Optional step
15	→		OPEN UE TEST LOOP COMPLETE	Optional step
16			RB RELEASE	Optional step
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: RAB#1: (TF0,TF0), (TF1,TF1) RAB#2: (TF0,TF0), (TF1,TF1)
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 55 bits RAB#2: UL RLC SDU size = 63 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	RAB#1: 55 bit (TF1) RAB#2: 63 bit (TF1)
6	→		UPLINK RLC SDU	RAB#1: 55 bit (TF1) RAB#2: 63 bit (TF1)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for RAB subflow#1 is limited to: (TF0,TF0),(TF2,TF2)
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	RAB #1: 39 bit (TF2)
13	→		UPLINK RLC SDU	RAB#1: 39 (TF2)
14			RB RELEASE	Optional step

14.2.9.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 6 the UE transmitted transport format shall be

- TF1 (1x39) for RAB subflow#1.

3. At step 6 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- no data shall be received on RAB subflow#2.

4. At step 13 the UE transmitted transport format shall be

- TF2 (1x55) for RAB subflow#1; and
- TF1 (1x63) for RAB subflow#2.

5. At step 13 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#2 with the same content as sent by SS.

~~2. At step 6 the UE transmitted transport format shall be~~

- ~~— TF1 (1x55) for RAB subflow#1; and~~
- ~~— TF1 (1x63) for RAB subflow#2.~~

~~3. At step 6 the UE shall return~~

- ~~— an RLC SDU on RAB subflow#1 with the same content as sent by SS; and~~
- ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS.~~

~~4. At step 13 the UE transmitted transport format shall TF2 (1x39) for RAB subflow#1.~~

~~5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.~~

14.2.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

14.2.10.1 Conformance requirement

See 14.2.4.1.

14.2.10.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.10.

14.2.10.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x49 (alt. 1x0)</u>	<u>0x54</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x54</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x49</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Downlink TFS:

		<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>	<u>0x54</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x54</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x49</u>	<u>N/A</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>DL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>DL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>DL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>DL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL TFC1</u>	<u>UL TFC1</u>	<u>DL TFC0, DL TFC3, UL TFC0, UL TFC3</u>
<u>2</u>	<u>DL TFC2</u>	<u>UL TFC2</u>	<u>DL TFC0, DL TFC5, UL TFC0, UL TFC5</u>

Initial conditions

UE in idle mode

Test procedure

Sub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.10 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC1, UL TFC3} using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1 and 54 bits for RAB subflow#2.
- d) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1, using transport format combination DL TFC1. No data is transmitted on RAB subflow#2.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. The SS checks that no data is received on RAB subflow#2.
- f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC2, UL TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 49 bits for RAB subflow#1 and 54 bits for RAB subflow#2.
- i) The SS transmits an RLC SDU of size 49 bits on RAB subflow#1 and an RLC SDU of size 54 bits on RAB subflow#2 using transport format combination DL TFC2.
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.
- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.10 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 and RAB subflow#2 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 49 bits for RAB subflow#1 and to 54 bits for RAB subflow#2.~~
- ~~d) The SS transmits an RLC SDU of size 49 bits on RAB subflow#1 using transport format TF1 and an RLC SDU of size 54 bits using transport format TF1.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1 using transport format TF1.~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format.~~
- ~~k) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC3}
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits RAB#2: UL RLC SDU size = 54 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	DL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x54 bits)
6	→		UPLINK RLC SDU	UL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0=0x54 bits)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC2, UL_TFC5}
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 49 bits RAB#2: UL RLC SDU size = 54 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	DL_TFC2: RAB#1: 49 bits (TF2=1x49 bits) RAB#2: 54 bits (TF1=1x54 bits)
13	→		UPLINK RLC SDU	UL_TFC2: RAB#1: 49 bits (TF2=1x49 bits) RAB#2: 54 bits (TF1=1x54 bits)
14	←		OPEN UE TEST LOOP	Optional step
15	→		OPEN UE TEST LOOP COMPLETE	Optional step
16			RB RELEASE	Optional step
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: RAB#1: (TF0,TF0), (TF1,TF1) RAB#2: (TF0,TF0), (TF1,TF1)
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 49 bits RAB#2: UL RLC SDU size = 54 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	RAB#1: 49 bit (TF1) RAB#2: 54 bit (TF1)
6	→		UPLINK RLC SDU	RAB#1: 49 bit (TF1) RAB#2: 54 bit (TF1)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for RAB subflow#1 is limited to: (TF0,TF0),(TF2,TF2)
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	RAB #1: 39 bit (TF2)
13	→		UPLINK RLC SDU	RAB#1: 39 (TF2)
14			RB RELEASE	Optional step

14.2.10.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 6 the UE transmitted transport format shall be

- TF1 (1x39) for RAB subflow#1.

3. At step 6 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- no data shall be received on RAB subflow#2.

4. At step 13 the UE transmitted transport format shall be

- TF2 (1x49) for RAB subflow#1; and
- TF1 (1x54) for RAB subflow#2.

5. At step 13 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#2 with the same content as sent by SS.

~~2. At step 6 the UE transmitted transport format shall be~~

- ~~— TF1 (1x49) for RAB subflow#1; and~~
- ~~— TF1 (1x54) for RAB subflow#2.~~

~~3. At step 6 the UE shall return~~

- ~~— an RLC SDU on RAB subflow#1 with the same content as sent by SS; and~~
- ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS.~~

~~4. At step 13 the UE transmitted transport format shall TF2 (1x39) for RAB subflow#1.~~

~~5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.~~

14.2.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

14.2.11.1 Conformance requirement

See 14.2.4.1.

14.2.11.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.11.

14.2.11.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x49 (alt. 1x0)</u>	<u>0x53</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x53</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x42</u>	<u>N/A</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Downlink TFS:

		<u>RAB subflow #1</u>	<u>RAB subflow #2</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>	<u>0x53</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x39</u>	<u>1x53</u>	<u>1x148</u>
	<u>TF2, bits</u>	<u>1x42</u>	<u>N/A</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, RAB subflow#2, DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>DL TFC2</u>	<u>(TF2, TF1, TF0)</u>
<u>DL TFC3</u>	<u>(TF0, TF0, TF1)</u>
<u>DL TFC4</u>	<u>(TF1, TF0, TF1)</u>
<u>DL TFC5</u>	<u>(TF2, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL TFC1</u>	<u>UL TFC1</u>	<u>DL TFC0, DL TFC3, UL TFC0, UL TFC3</u>
<u>2</u>	<u>DL TFC2</u>	<u>UL TFC2</u>	<u>DL TFC0, DL TFC5, UL TFC0, UL TFC5</u>

Initial conditions

UE in idle mode

Test procedure

Sub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.11 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC1, UL TFC3} using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1 and 53 bits for RAB subflow#2.
- d) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1, using transport format combination DL TFC1. No data is transmitted on RAB subflow#2.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. The SS checks that no data is received on RAB subflow#2.
- f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC2, UL TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 42 bits for RAB subflow#1 and 53 bits for RAB subflow#2.
- i) The SS transmits an RLC SDU of size 42 bits on RAB subflow#1 and an RLC SDU of size 53 bits on RAB subflow#2 using transport format combination DL TFC2.
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.
- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.11 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 and RAB subflow#2 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 42 bits for RAB subflow#1 and to 53 bits for RAB subflow#2.~~
- ~~d) The SS transmits an RLC SDU of size 42 bits on RAB subflow#1 using transport format TF1 and an RLC SDU of size 53 bits using transport format TF1.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have the correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 39 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 39 bits on RAB subflow#1 using transport format TF1.~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format.~~
- ~~k) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC3}
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits RAB#2: UL RLC SDU size = 53 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	DL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0= 0x53 bits)
6	→		UPLINK RLC SDU	UL_TFC1: RAB#1: 39 bits (TF1=1x39 bits) RAB#2: 0 bits (TF0= 0x53 bits)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC2, UL_TFC5}
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 42 bits RAB#2: UL RLC SDU size = 53 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	DL_TFC2: RAB#1: 42 bits (TF2=1x42 bits) RAB#2: 53 bits (TF1=1x53 bits)
13	→		UPLINK RLC SDU	UL_TFC2: RAB#1: 42 bits (TF2=1x42 bits) RAB#2: 53 bits (TF1=1x53 bits)
14	←		OPEN UE TEST LOOP	Optional step
15	→		OPEN UE TEST LOOP COMPLETE	Optional step
16			RB RELEASE	Optional step
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to: RAB#1: (TF0,TF0), (TF1,TF1) RAB#2: (TF0,TF0), (TF1,TF1)
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 42 bits RAB#2: UL RLC SDU size = 53 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	RAB#1: 42 bit (TF1) RAB#2: 53 bit (TF1)
6	→		UPLINK RLC SDU	RAB#1: 42 bit (TF1) RAB#2: 53 bit (TF1)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations for RAB subflow#1 is limited to: (TF0,TF0),(TF2,TF2)
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using RAB#1: UL RLC SDU size = 39 bits
11	→		CLOSE UE TEST LOOP COMPLETE	TC
12	←		DOWNLINK RLC SDU	RAB #1: 39 bit (TF2)
13	→		UPLINK RLC SDU	RAB#1: 39 (TF2)
14			RB RELEASE	Optional step

14.2.11.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 6 the UE transmitted transport format shall be

- TF1 (1x39) for RAB subflow#1.

3. At step 6 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- no data shall be received on RAB subflow#2.

4. At step 13 the UE transmitted transport format shall be

- TF2 (1x42) for RAB subflow#1; and
- TF1 (1x53) for RAB subflow#2.

5. At step 13 the UE shall return

- an RLC SDU on RAB subflow#1 with the same content as sent by SS; and
- an RLC SDU on RAB subflow#2 with the same content as sent by SS.

~~2. At step 6 the UE transmitted transport format shall be~~

- ~~— TF1 (1x42) for RAB subflow#1; and~~
- ~~— TF1 (1x53) for RAB subflow#2.~~

~~3. At step 6 the UE shall return~~

- ~~— an RLC SDU on RAB subflow#1 with the same content as sent by SS; and~~
- ~~— an RLC SDU on RAB subflow#2 with the same content as sent by SS.~~

~~4. At step 13 the UE transmitted transport format shall TF2 (1x39) for RAB subflow#1.~~

~~5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.~~

14.2.12 Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.12.1 Conformance requirement

See 14.2.4.1.

14.2.12.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12.

14.2.13.3 Method of test

Uplink TFS:

	TFI	RAB subflow #1	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Uplink TFCS:

TFCI	(RAB subflow#1, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

		RAB subflow #1	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Downlink TFCS:

TFCI	(RAB subflow#1, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS under test	Implicitely tested
<u>1</u>	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3
<u>2</u>	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5

Initial conditionsUE in idle modeTest procedureSub test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC3} using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 576 bits for RAB subflow#1.
- d) The SS transmits an RLC SDU of size 576 bits on RAB subflow#1, using transport format combination DL_TFC1.
- e) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and is received having the correct transport format. f) The SS open the UE test loop.

Sub test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC2, UL_TFC5} using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1152 bits for RAB subflow#1.
- i) The SS transmits an RLC SDU of size 1152 bits on RAB subflow#1 using transport format combination DL_TFC2.
- j) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has the correct content and are received having the correct transport format.
- k) The SS may optionally open the UE test loop.
- l) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u>
<u>2</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u>
<u>3</u>	←		<u>CONTROL</u>	<u>{UL_TFC0, UL_TFC1, UL_TFC3}</u>
<u>4</u>	→		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u>
<u>5</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>UL_RLC_SDU size = 576 bits</u>
<u>6</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL_TFC1:</u>
<u>7</u>	→		<u>UPLINK RLC SDU</u>	<u>576 bits (TF1=1x576 bits)</u>
<u>8</u>	←		<u>OPEN UE TEST LOOP</u>	<u>UL_TFC1:</u>
<u>9</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>576 bits (TF1=1x576 bits)</u>
<u>10</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u>
<u>11</u>	→		<u>CONTROL</u>	<u>{UL_TFC0, UL_TFC2, UL_TFC5}</u>
<u>12</u>	→		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u>
<u>13</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>UL_RLC_SDU size = 1152 bits</u>
<u>14</u>	←		<u>DOWNLINK RLC SDU</u>	<u>TC</u>
<u>15</u>	→		<u>UPLINK RLC SDU</u>	<u>DL_TFC2:</u>
<u>16</u>	←		<u>OPEN UE TEST LOOP</u>	<u>1152 bits (TF2=2x576 bits)</u>
	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>UL_TFC2:</u>
			<u>RB RELEASE</u>	<u>1152 bits (TF2=2x576 bits)</u>
				<u>Optional step</u>
				<u>Optional step</u>
				<u>Optional step</u>

14.2.12.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE transmitted transport format on RAB subflow#1 shall be TF1 (1x576).
3. At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
4. At step 13 the UE transmitted transport format on RAB subflow#1 shall be TF2 (2x576).
5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.13.12 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.13.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

14.2.13.12.1 Conformance requirement

See 14.2.4.1.

14.2.13.12.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.13 for the 20 ms TTI case².

14.2.13.12.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x640</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>2x640</u>	<u>1x148</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0)</u>
<u>UL_TFC2</u>	<u>(TF0, TF1)</u>
<u>UL_TFC3</u>	<u>(TF1, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x640</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>2x640</u>	<u>1x148</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL_TFC0</u>	<u>(TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0)</u>
<u>DL_TFC2</u>	<u>(TF0, TF1)</u>
<u>DL_TFC3</u>	<u>(TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL_TFC1</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2</u>

Initial conditions

UE in idle mode

Test procedure

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.132 for the 20 ms TTI case using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 using the RRC transport format combination control procedure.
- be) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1280 bits for RAB subflow#1 if configuration having TTI=20ms is used or 2560 bits if configuration having TTI=40ms is used.
- cd) The SS transmits an RLC SDU of size 1280 bits if configuration having TTI=20 ms is used; or RLC SDU of size 2560 bits if configuration having TTI=40 ms is used on RAB subflow#1 using transport format combination DL_TFC1
- de) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and ~~RAB subflow#2~~ have has the correct content and is ~~are~~ received having the correct transport format.
- ef) The SS may optionally open the UE test loop.
- fg) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1 UE test loop mode 1 is closed using UL RLC SDU size = 1280 bits DL_TFC1: 1280 bits (TF1=2x640 bits) UL_TFC1: 1280 bits (TF1=2x640 bits) Optional step Optional step Optional step
2	←		CLOSE UE TEST LOOP	
3	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
4	←		DOWNLINK RLC SDU	
5	→		UPLINK RLC SDU	
6	←		OPEN UE TEST LOOP	
7	→		OPEN UE TEST LOOP COMPLETE	
8			RB RELEASE	
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to (TF0,TF0), (TF1,TF1) UE test loop mode 1 is closed using UL RLC SDU size = 1280 bits if TTI=20ms; or UL RLC SDU size = 2560 bits if TTI=40ms 1280 bit (TF1) if TTI=20ms; or 2560 if TTI=40ms 1280 bit (TF1) if TTI=20ms; or 2560 if TTI=40ms Optional step Optional step Optional step
3	←		CLOSE UE TEST LOOP	
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	
6	→		UPLINK RLC SDU	
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9			RB RELEASE	

14.2.13.12.4 Test requirements

- At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 56 the UE transmitted transport format on RAB subflow#1 shall be TF1 (2x640) if configuration having TTI=20 ms is used; or TF1 (4x640) if configuration having TTI=40 ms is used.
- At step 56 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.13.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40 ms TTI

14.2.13.2.1 Conformance requirement

See 14.2.4.1.

14.2.13.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.13 for the 40 ms TTI case.

14.2.13.2.3 Method of test

Uplink TFS:

	TFI	RAB subflow #1	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	4x640	1x148

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0)</u>
<u>UL_TFC2</u>	<u>(TF0, TF1)</u>
<u>UL_TFC3</u>	<u>(TF1, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x640</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>4x640</u>	<u>1x148</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL_TFC0</u>	<u>(TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0)</u>
<u>DL_TFC2</u>	<u>(TF0, TF1)</u>
<u>DL_TFC3</u>	<u>(TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL_TFC1</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2</u>

Initial conditionsUE in idle modeTest procedure

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.13 for the 40 ms TTI case using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 2560 bits for RAB subflow#1.
- c) The SS transmits an RLC SDU of size 2560 bits on RAB subflow#1 using transport format combination DL_TFC1
- d) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and has the correct content and is received having the correct transport format.
- e) The SS may optionally open the UE test loop.
- f) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 2560 bits</u>
<u>2</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>3</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>4</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL TFC1:</u> <u>2560 bits (TF1=4x640 bits)</u> <u>UL TFC1:</u> <u>2560 bits (TF1=4x640 bits)</u>
<u>5</u>	→		<u>UPLINK RLC SDU</u>	
<u>6</u>	←		<u>OPEN UE TEST LOOP</u>	<u>Optional step</u>
<u>7</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>Optional step</u>
<u>8</u>			<u>RB RELEASE</u>	<u>Optional step</u>

14.2.13.2.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 5 the UE transmitted transport format on RAB subflow#1 shall be TF1 (4x640).
3. At step 5 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.14.13 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.14.1 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

14.2.14.13.1 Conformance requirement

See 14.2.4.1.

14.2.14.13.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.14 for the 20 ms TTI case³.

14.2.14.13.3 Method of testUplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x640</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x640</u>	<u>1x148</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0)</u>
<u>UL TFC2</u>	<u>(TF0, TF1)</u>
<u>UL TFC3</u>	<u>(TF1, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x640</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x640</u>	<u>1x148</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0)</u>
<u>DL TFC2</u>	<u>(TF0, TF1)</u>
<u>DL TFC3</u>	<u>(TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL TFC1</u>	<u>UL TFC1</u>	<u>DL TFC0, DL TFC2, UL TFC0, UL TFC2</u>

Initial conditions

UE in idle mode

Test procedure

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.143 for the 20 ms TTI case using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~b)e) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 640 bits for RAB subflow#1 if configuration having TTI=20ms is used or 1280 bits if configuration having TTI=40ms is used.~~
- ~~c)d) The SS transmits an RLC SDU of size 640 bits if configuration having TTI=20 ms is used; or RLC SDU of size 1280 bits if configuration having TTI=40 ms is used on RAB subflow#1 using transport format combination DL TFC1.~~
- ~~d)e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and RAB subflow#2 have has the correct content and isare received having the correct transport format.~~
- e)f) The SS may optionally open the UE test loop.
- f)g) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1 UE test loop mode 1 is closed using UL RLC SDU size = 640 bits DL_TFC1: 640 bits (TF1=1x640 bits) UL_TFC1: 640 bits (TF1=1x640 bits) Optional step Optional step Optional step
2	←		CLOSE UE TEST LOOP	
3	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
4	←		DOWNLINK RLC SDU	
5	→		UPLINK RLC SDU	
6	←		OPEN UE TEST LOOP	
7	→		OPEN UE TEST LOOP COMPLETE	
8			RB RELEASE	
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to (TF0,TF0), (TF1,TF1) UE test loop mode 1 is closed using UL RLC SDU size = 640 bits if TTI=20ms; or UL RLC SDU size = 1280 bits if TTI=40ms 640 bit (TF1) if TTI=20ms; or 1280 if TTI=40ms 640 bit (TF1) if TTI=20ms; or 1280 if TTI=40ms Optional step Optional step Optional step
3	←		CLOSE UE TEST LOOP	
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	
6	→		UPLINK RLC SDU	
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9			RB RELEASE	

14.2.14.13.4 Test requirements

- At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 56 the UE transmitted transport format on RAB subflow#1 shall be TF1 (1x640) if configuration having TTI=20 ms is used; or TF1 (2x640) if configuration having TTI=40 ms is used.
- At step 56 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.14.2 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40 ms TTI

14.2.14.2.1 Conformance requirement

See 14.2.4.1.

14.2.14.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.14 for the 40 ms TTI case.

14.2.14.2.3 Method of test

Uplink TFS:

	TFI	RAB subflow #1	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	2x640	1x148

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0)</u>
<u>UL_TFC2</u>	<u>(TF0, TF1)</u>
<u>UL_TFC3</u>	<u>(TF1, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x640</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>2x640</u>	<u>1x148</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL_TFC0</u>	<u>(TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0)</u>
<u>DL_TFC2</u>	<u>(TF0, TF1)</u>
<u>DL_TFC3</u>	<u>(TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL_TFC1</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2</u>

Initial conditions

UE in idle mode

Test procedure

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.14 for the 40 ms TTI case using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1280 bits for RAB subflow#1.
- c) The SS transmits an RLC SDU of size 1280 bits using transport format combination DL_TFC1.
- d) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 and has the correct content and is received having the correct transport format.
- e) The SS may optionally open the UE test loop.
- f) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 1280 bits</u>
<u>2</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>3</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>4</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL_TFC1:</u> <u>1280 bits (TF1=2x640 bits)</u> <u>UL_TFC1:</u> <u>1280 bits (TF1=2x640 bits)</u>
<u>5</u>	→		<u>UPLINK RLC SDU</u>	
<u>6</u>	←		<u>OPEN UE TEST LOOP</u>	<u>Optional step</u>
<u>7</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>Optional step</u>
<u>8</u>			<u>RB RELEASE</u>	<u>Optional step</u>

14.2.14.2.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 5 the UE transmitted transport format on RAB subflow#1 shall be TF1 (2x640).
3. At step 5 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.15 Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.15.1 Conformance requirement

See 14.2.4.1.

14.2.15.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.15.

14.2.15.3 Method of testUplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x576</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x576</u>	<u>1x148</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0)</u>
<u>UL_TFC2</u>	<u>(TF0, TF1)</u>
<u>UL_TFC3</u>	<u>(TF1, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x576</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x576</u>	<u>1x148</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL_TFC0</u>	<u>(TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0)</u>
<u>DL_TFC2</u>	<u>(TF0, TF1)</u>
<u>DL_TFC3</u>	<u>(TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL_TFC1</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2</u>

Initial conditionsUE in idle modeTest procedure

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.15 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 576 bits for RAB subflow#1.
- c) The SS transmits an RLC SDU of size 576 bits using transport format combination DL_TFC1.
- d) The SS checks that the content of the received RLC SDU returned in uplink on RAB subflow#1 has correct content and is received having the correct transport format.
- e) The SS may optionally open the UE test loop.
- f) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 576 bits</u>
<u>2</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>3</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>4</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL_TFC1:</u> <u>576 bits (TF1=1x576)</u>
<u>5</u>	→		<u>UPLINK RLC SDU</u>	<u>UL_TFC1:</u> <u>576 bits (TF1=1x576)</u>
<u>6</u>	←		<u>OPEN UE TEST LOOP</u>	<u>Optional step</u>
<u>7</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>Optional step</u>
<u>8</u>			<u>RB RELEASE</u>	<u>Optional step</u>

14.2.15.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 5 the UE transmitted transport format on RAB subflow#1 shall be TF1 (1x576).
3. At step 5 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.1614 Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See test case 14.2.12.

~~14.2.14.1 Conformance requirement~~

~~See 14.2.4.1.~~

~~14.2.14.2 Test purpose~~

~~To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.14.~~

~~14.2.14.3 Method of test~~

~~Initial conditions~~

~~UE in idle mode~~

~~Test procedure~~

- ~~a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.14 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.~~
- ~~b) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF1,TF1)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 576 bits for RAB subflow#1.~~
- ~~d) The SS transmits an RLC SDU of size 576 bits using transport format TF1.~~
- ~~e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 is correct content and are received having the correct transport format.~~
- ~~f) The SS open the UE test loop.~~
- ~~g) The SS limits the UE allowed uplink transport format combinations to {(TF0,TF0),(TF2,TF2)} for RAB subflow#1 using the RRC transport format combination control procedure.~~
- ~~h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1152 bits for RAB subflow#1.~~
- ~~i) The SS transmits an RLC SDU of size 1152 bits using transport format TF2~~
- ~~j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 is correct content and are received having the correct transport format.~~
- ~~k) The SS may optionally open the UE test loop.~~
- ~~l) The SS may optionally release the radio bearer.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to (TF0,TF0), (TF1,TF1)
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using UL RLC SDU size = 576 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	576 bit (TF1)
6	→		UPLINK RLC SDU	576 bit (TF1)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to (TF0,TF0), (TF2,TF2)
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using UL RLC SDU size = 1152 bits
11	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
12	←		DOWNLINK RLC SDU	1152 bit (TF1)
13	→		UPLINK RLC SDU	1152 bit (TF1)
14	←		OPEN UE TEST LOOP	Optional step
15	→		OPEN UE TEST LOOP COMPLETE	Optional step
16			RB RELEASE	Optional step

14.2.14.4 Test requirements

- At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 6 the UE transmitted transport format on RAB subflow#1 shall be TF1 (1x576).
- At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
- At step 13 the UE transmitted transport format on RAB subflow#1 shall be TF2 (2x576).
- At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.1715 Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.175.1 Conformance requirement

See 14.2.4.1.

14.2.175.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.175.

14.2.175.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x576</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x576</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x576</u>	<u>N/A</u>
	<u>TF3, bits</u>	<u>3x576</u>	<u>N/A</u>
	<u>TF4, bits</u>	<u>4x576</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0)</u>
<u>UL_TFC2</u>	<u>(TF2, TF0)</u>
<u>UL_TFC3</u>	<u>(TF3, TF0)</u>
<u>UL_TFC4</u>	<u>(TF4, TF0)</u>
<u>UL_TFC5</u>	<u>(TF0, TF1)</u>
<u>UL_TFC6</u>	<u>(TF1, TF1)</u>
<u>UL_TFC7</u>	<u>(TF2, TF1)</u>
<u>UL_TFC8</u>	<u>(TF3, TF1)</u>
<u>UL_TFC9</u>	<u>(TF4, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x576</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x576</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x576</u>	<u>N/A</u>
	<u>TF3, bits</u>	<u>3x576</u>	<u>N/A</u>
	<u>TF4, bits</u>	<u>4x576</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL_TFC0</u>	<u>(TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0)</u>
<u>DL_TFC2</u>	<u>(TF2, TF0)</u>
<u>DL_TFC3</u>	<u>(TF3, TF0)</u>
<u>DL_TFC4</u>	<u>(TF4, TF0)</u>
<u>DL_TFC5</u>	<u>(TF0, TF1)</u>
<u>DL_TFC6</u>	<u>(TF1, TF1)</u>
<u>DL_TFC7</u>	<u>(TF2, TF1)</u>
<u>DL_TFC8</u>	<u>(TF3, TF1)</u>
<u>DL_TFC9</u>	<u>(TF4, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS under test</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL_TFC1</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC5, DL_TFC6, UL_TFC0, UL_TFC5, UL_TFC6</u>
<u>2</u>	<u>DL_TFC2</u>	<u>UL_TFC2</u>	<u>DL_TFC0, DL_TFC5, DL_TFC7, UL_TFC0, UL_TFC5, UL_TFC7</u>
<u>3</u>	<u>DL_TFC3</u>	<u>UL_TFC3</u>	<u>DL_TFC0, DL_TFC5, DL_TFC8, UL_TFC0, UL_TFC5, UL_TFC8</u>
<u>4</u>	<u>DL_TFC4</u>	<u>UL_TFC4</u>	<u>DL_TFC0, DL_TFC5, DL_TFC9, UL_TFC0, UL_TFC5, UL_TFC9</u>

Initial conditions

UE in idle mode

Test procedure

Sub-test 1:

- a) The SS setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.175 using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6} ~~{(TF0,TF0),(TF1,TF1)}~~ for RAB subflow#1 using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 576 bits for RAB subflow#1.
- d) The SS transmits an RLC- SDU of size 576 bits using transport format combination DL_TFC1 (1x576).
- e) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 ~~is~~ has correct content and ~~is~~ are received having the correct transport format.
- f) The SS open the UE test loop.

Sub-test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7} ~~{(TF0,TF0),(TF2,TF2)}~~ for RAB subflow#1 using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1152 bits for RAB subflow#1.
- i) The SS transmits an RLC- SDU of size 1152 bits using transport format combination DL_TFC2 (2x576).
- j) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 ~~is~~ has correct content and ~~is~~ are received having the correct transport format.
- k) The SS open the UE test loop.

Sub-test 3:

- l) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8} ~~{(TF0,TF0),(TF3,TF3)}~~ for RAB subflow#1 using the RRC transport format combination control procedure.
- m) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1728 bits for RAB subflow#1.
- n) The SS transmits an RLC- SDU of size 1728 bits using transport format combination DL_TFC3 (3x576).
- o) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 ~~has~~ is correct content and ~~is~~ are received having the correct transport format.
- p) The SS open the UE test loop.
- q) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9} ~~{(TF0,TF0),(TF4,TF4)}~~ for RAB subflow#1 using the RRC transport format combination control procedure.
- r) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 2304 bits for RAB subflow#1.
- s) The SS transmits an RLC- SDU of size 2304 bits using transport format combination DL_TFC4 (4x576).
- t) The SS checks that the content of the received RLC SDUs returned in uplink on RAB subflow#1 ~~has~~ is correct content and ~~is~~ are received having the correct transport format.

- u) The SS may optionally open the UE test loop.
- v) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			UE Radio Bearer Test Mode Activation	See generic procedures in clause 14.1.1
2	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6}(TF0,TF0), (TF1,TF1)
3	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using UL RLC SDU size = 576 bits
4	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
5	←		DOWNLINK RLC SDU	DL_TFC1: 576 bits (TF1=1x576 bits)576 bit (TF1)
6	→		UPLINK RLC SDU	UL_TFC1: 576 bits (TF1=1x576 bits)576 bit (TF1)
7	←		OPEN UE TEST LOOP	
8	→		OPEN UE TEST LOOP COMPLETE	
9	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7}(TF0,TF0), (TF2,TF2)
10	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using UL RLC SDU size = 1152 bits
11	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
12	←		DOWNLINK RLC SDU	DL_TFC2: 1152 bits (TF2=2x576 bits)1152 bit (TF1)
13	→		UPLINK RLC SDU	UL_TFC2: 1152 bits (TF2=2x576 bits)1152 bit (TF1)
14	←		OPEN UE TEST LOOP	
15	→		OPEN UE TEST LOOP COMPLETE	
16	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8}(TF0,TF0), (TF3,TF3)
17	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using UL RLC SDU size = 1728 bits
18	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
19	←		DOWNLINK RLC SDU	DL_TFC3: 1728 bits (TF3=3x576 bits)1728 bit (TF1)
20	→		UPLINK RLC SDU	UL_TFC3: 1728 bits (TF3=3x576 bits)1728 bit (TF1)
21	←		OPEN UE TEST LOOP	
22	→		OPEN UE TEST LOOP COMPLETE	
23	←		TRANSPORT FORMAT COMBINATION CONTROL	Transport format combinations is limited to {UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9}(TF0,TF0), (TF4,TF4)
24	←		CLOSE UE TEST LOOP	UE test loop mode 1 is closed using UL RLC SDU size = 2304 bits
25	→		CLOSE UE TEST LOOP COMPLETE (DCCH)	
26	←		DOWNLINK RLC SDU	DL_TFC4: 2304 bits (TF4=4x576 bits)2304 bit (TF1)
27	→		UPLINK RLC SDU	UL_TFC4: 2304 bits (TF4=4x576 bits)2304 bit (TF1)
28	←		OPEN UE TEST LOOP	Optional step
29	→		OPEN UE TEST LOOP COMPLETE	Optional step
30			RB RELEASE	Optional step

14.2.175.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE transmitted transport format on RAB subflow#1 shall be TF1 (1x576).
3. At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
4. At step 13 the UE transmitted transport format on RAB subflow#1 shall be TF2 (2x576).
5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
6. At step 20 the UE transmitted transport format on RAB subflow#1 shall be TF3 (3x576).
7. At step 20 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
8. At step 27 the UE transmitted transport format on RAB subflow#1 shall be TF4 (4x576).
9. At step 27 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.1816 Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.18.1 Conformance requirement

See 14.2.4.1.

14.2.18.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.186.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL: 64 kbps., the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.1.12 (Conversational/unknown/UL:28.8 kbps) is used in uplink. For all sub-tests UL TFC1 is used.

14.2.18.3 Method of test

Uplink TFS:

	TFI	RAB subflow #1	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	0x148
	TF2, bits	2x576	N/A

Uplink TFCS:

TFCI	(RAB subflow#1, DCCH)
UL TFC0	(TF0, TF0)
UL TFC1	(TF1, TF0)
UL TFC2	(TF2, TF0)
UL TFC3	(TF0, TF1)
UL TFC4	(TF1, TF1)
UL TFC5	(TF2, TF1)

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	TF0, bits	0x320	0x148
	TF1, bits	1x320	0x148
	TF2, bits	2x320	N/A
	TF3, bits	4x320	N/A
	TF4, bits	8x320	N/A

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS used to be able to return DL data</u>	<u>Implicitely tested</u>
<u>1</u>	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, DL_TFC6
<u>2</u>	DL_TFC2	UL_TFC1	DL_TFC0, DL_TFC5, DL_TFC7
<u>3</u>	DL_TFC3	UL_TFC1	DL_TFC0, DL_TFC5, DL_TFC8
<u>4</u>	DL_TFC4	UL_TFC1	DL_TFC0, DL_TFC5, DL_TFC9

Initial conditions

UE in idle mode

Test procedure

Sub-test 1:

- a) The SS setup the radio bearer using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1. In downlink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.18 shall be used; and in uplink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12 shall be used.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 320 bits for RAB subflow#1.
- d) The SS transmits an RLC SDU of size 320 bits using transport format combination DL_TFC1 (1x320).
- e) The SS checks the content of the received RLC SDU.
- f) The SS open the UE test loop.

Sub-test 2:

g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 640 bits for RAB subflow#1.

i) The SS transmits an RLC SDU of size 640 bits using transport format combination DL_TFC2 (2x320).

j) The SS checks the content of the received RLC SDU.

k) The SS open the UE test loop.

Sub-test 3:

l) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

m) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1280 bits for RAB subflow#1.

n) The SS transmits an RLC SDU of size 1280 bits using transport format combination DL_TFC3 (4x320).

o) The SS checks the content of the received RLC SDU.

p) The SS open the UE test loop.

Sub-test 4:

q) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

r) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 2560 bits for RAB subflow#1.

s) The SS transmits an RLC SDU of size 2560 bits using transport format combination DL_TFC4 (8x320).

t) The SS checks the content of the received RLC SDU.

u) The SS may optionally open the UE test loop.

v) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u> <u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 320 bits</u>
<u>2</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	
<u>3</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>4</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	<u>DL TFC1:</u> <u>320 bits (TF1=1x320 bits)</u> <u>UL TFC1:</u> <u>320 bits (TF1=1x576 bits)</u> <u>1xUL RLC PDU (320 bits + padding)</u>
<u>5</u>	←		<u>DOWNLINK RLC SDU</u>	
<u>6</u>	→		<u>UPLINK RLC SDU</u>	
<u>7</u>	←		<u>OPEN UE TEST LOOP</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 640 bits</u>
<u>8</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>9</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	
<u>10</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>DL TFC2: 640 bits (TF2=2x320)</u> <u>UL TFC1:</u> <u>640 bits (TF1=1x576 bits)</u> <u>2xUL RLC PDU, padding the 2nd RLC PDU)</u>
<u>11</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>12</u>	←		<u>DOWNLINK RLC SDU</u>	
<u>13</u>	→		<u>UPLINK RLC SDU</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 1280 bits</u>
<u>14</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>15</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>16</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	<u>DL TFC3:</u> <u>1280 bits (TF3=4x320 bits)</u> <u>UL TFC1:</u> <u>1280 bits (TF1=1x576 bits)</u> <u>3xRLC PDUs, padding the 3rd RLC PDU</u>
<u>17</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>18</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>19</u>	←		<u>DOWNLINK RLC SDU</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 2560 bits</u>
<u>20</u>	→		<u>UPLINK RLC SDU</u>	
<u>21</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>22</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>DL TFC4:</u> <u>2560 bits (TF4=8x320 bits)</u> <u>UL TFC1:</u> <u>2560 bits (TF1=1x576 bits)</u> <u>5xRLC PDUs, padding the 5th RLC PDU</u>
<u>23</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	
<u>24</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>25</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	<u>Optional step</u> <u>Optional step</u> <u>Optional step</u>
<u>26</u>	←		<u>DOWNLINK RLC SDU</u>	
<u>27</u>	→		<u>UPLINK RLC SDU</u>	
<u>28</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>29</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>30</u>			<u>RB RELEASE</u>	

14.2.18.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
3. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

4. At step 20 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

5. At step 27 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.19.17 Streaming / unknown / UL:64 DL:0 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.19.1 Conformance requirement

See 14.2.4.1.

14.2.19.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.19.

To be able to test the uplink radio bearer using the UE loopback function for the reference radio bearer UL:64 DL: 0 kbps, the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.1.12 (Conversational/unknown/UL:28.8 kbps) is used in downlink. For all sub-tests DL TFC1 is used.

14.2.19.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x320</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x320</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x320</u>	<u>N/A</u>
	<u>TF3, bits</u>	<u>4x320</u>	<u>N/A</u>
	<u>TF4, bits</u>	<u>8x320</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0)</u>
<u>UL_TFC2</u>	<u>(TF2, TF0)</u>
<u>UL_TFC3</u>	<u>(TF3, TF0)</u>
<u>UL_TFC4</u>	<u>(TF4, TF0)</u>
<u>UL_TFC5</u>	<u>(TF0, TF1)</u>
<u>UL_TFC6</u>	<u>(TF1, TF1)</u>
<u>UL_TFC7</u>	<u>(TF2, TF1)</u>
<u>UL_TFC8</u>	<u>(TF3, TF1)</u>
<u>UL_TFC9</u>	<u>(TF4, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x576</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x576</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x576</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

Sub-tests:

<u>Sub-test</u>	<u>Uplink TFCS Under test</u>	<u>Downlink TFCS used to be able to return DL data</u>	<u>Implicitely tested</u>
1	UL_TFC1	DL_TFC1	UL_TFC0, UL_TFC5, UL_TFC6
2	UL_TFC2	DL_TFC1	UL_TFC0, UL_TFC5, UL_TFC7
3	UL_TFC3	DL_TFC1	UL_TFC0, UL_TFC5, UL_TFC8
4	UL_TFC4	DL_TFC1	UL_TFC0, UL_TFC5, UL_TFC9

Initial conditions

UE in idle mode

Test procedure

Sub-test 1:

- a) The SS setup the radio bearer using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1. In uplink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.19 shall be used; and in downlink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12 shall be used.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6} for RAB subflow#1 using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 320 bits for RAB subflow#1.
- d) The SS transmits an RLC SDU of size 576 bits using transport format combination DL_TFC1 (1x576).
- e) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- f) The SS open the UE test loop.

Sub-test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7} for RAB subflow#1 using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 640 bits for RAB subflow#1.
- i) The SS transmits an RLC SDU of size 640 bits using transport format combination DL_TFC1 (1x576).
- j) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- k) The SS open the UE test loop.

Sub-test 3:

- l) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8} for RAB subflow#1 using the RRC transport format combination control procedure.

- m) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1280 bits for RAB subflow#1.
- n) The SS transmits an RLC SDU of size 1280 bits using transport format combination DL_TFC1 (1x576).
- o) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- p) The SS open the UE test loop.

Sub-test 4:

- q) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9} for RAB subflow#1 using the RRC transport format combination control procedure.
- r) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 2560 bits for RAB subflow#1.
- s) The SS transmits an RLC SDU of size 2560 bits using transport format combination DL_TFC1 (1x576).
- t) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- u) The SS may optionally open the UE test loop.
- v) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u>
<u>2</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u>
<u>3</u>	←		<u>CONTROL</u>	<u>{UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6}</u>
<u>4</u>	→		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u>
<u>5</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>UL RLC SDU size = 320 bits</u>
<u>6</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL_TFC1:</u>
<u>7</u>	→		<u>UPLINK RLC SDU</u>	<u>320 bits (TF1=1x576 bits)</u>
<u>8</u>	←		<u>OPEN UE TEST LOOP</u>	<u>1xRLC PDUs, padding</u>
<u>9</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>UL_TFC1:</u>
<u>10</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>320 bits (TF1=1x320 bits)</u>
<u>11</u>	←		<u>CONTROL</u>	<u>Transport format combinations is limited to</u>
<u>12</u>	→		<u>CLOSE UE TEST LOOP</u>	<u>{UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7}</u>
<u>13</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>UE test loop mode 1 is closed using</u>
<u>14</u>	←		<u>DOWNLINK RLC SDU</u>	<u>UL RLC SDU size = 640 bits</u>
<u>15</u>	→		<u>UPLINK RLC SDU</u>	<u>DL_TFC1:</u>
<u>16</u>	←		<u>OPEN UE TEST LOOP</u>	<u>640 bits (TF1=1x576 bits)</u>
<u>17</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>2 x RLC PDUs, padding the 2nd RLC PDU</u>
<u>18</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>UL_TFC2:</u>
<u>19</u>	←		<u>CONTROL</u>	<u>640 (TF2=2x320 bits)</u>
<u>20</u>	→		<u>CLOSE UE TEST LOOP</u>	<u>Transport format combinations is limited to</u>
<u>21</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>{UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8}</u>
<u>22</u>	←		<u>DOWNLINK RLC SDU</u>	<u>UE test loop mode 1 is closed using</u>
<u>23</u>	→		<u>UPLINK RLC SDU</u>	<u>UL RLC SDU size = 1280 bits</u>
<u>24</u>	←		<u>OPEN UE TEST LOOP</u>	<u>DL_TFC1:</u>
<u>25</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>1280 bits (TF1=1x576 bits)</u>
<u>26</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>3 x RLC PDUs, padding the 3rd RLC PDU</u>
<u>27</u>	←		<u>CONTROL</u>	<u>UL_TFC3:</u>
<u>28</u>	→		<u>CLOSE UE TEST LOOP</u>	<u>1280 bits (TF3=4x320 bits)</u>
<u>29</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>Transport format combinations is limited to</u>
<u>30</u>	←		<u>DOWNLINK RLC SDU</u>	<u>{UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9}</u>
	→		<u>UPLINK RLC SDU</u>	<u>UE test loop mode 1 is closed using</u>
	←		<u>OPEN UE TEST LOOP</u>	<u>UL RLC SDU size = 2560 bits</u>
	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>DL_TFC1:</u>
	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>2560 bits (TF1=1x576 bits)</u>
	←		<u>CONTROL</u>	<u>5 x RLC PDUs, padding the 5th RLC PDU</u>
	→		<u>CLOSE UE TEST LOOP</u>	<u>UL_TFC4:</u>
	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>2560 bits (TF4=8x320 bits)</u>
	←		<u>DOWNLINK RLC SDU</u>	<u>Optional step</u>
	→		<u>UPLINK RLC SDU</u>	<u>Optional step</u>
	←		<u>OPEN UE TEST LOOP</u>	<u>Optional step</u>
	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
	←		<u>RB RELEASE</u>	

14.2.19.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE transmitted transport format on RAB subflow#1 shall be TF1 (1x320).
3. At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

4. At step 13 the UE transmitted transport format on RAB subflow#1 shall be TF2 (2x320).
5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
6. At step 20 the UE transmitted transport format on RAB subflow#1 shall be TF3 (4x320).
7. At step 20 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
8. At step 27 the UE transmitted transport format on RAB subflow#1 shall be TF4 (8x320).
9. At step 27 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.2018 Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.20.1 Conformance requirement

See 14.2.4.1.

14.2.20.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.2018.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL:128 kbps., the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.1.12 (Conversational/unknown/UL:28.8 kbps) is used in uplink. For all sub-tests UL TFC1 is used.

14.2.20.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x576</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x576</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x576</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF0)</u>
<u>UL TFC3</u>	<u>(TF0, TF1)</u>
<u>UL TFC4</u>	<u>(TF1, TF1)</u>
<u>UL TFC5</u>	<u>(TF2, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x320</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x320</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x320</u>	<u>N/A</u>
	<u>TF3, bits</u>	<u>4x320</u>	<u>N/A</u>
	<u>TF4, bits</u>	<u>8x320</u>	<u>N/A</u>
	<u>TF5, bits</u>	<u>16x320</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS used to be able to return DL data</u>	<u>Implicitely tested</u>
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, DL_TFC7
2	DL_TFC2	UL_TFC1	DL_TFC0, DL_TFC6, DL_TFC8
3	DL_TFC3	UL_TFC1	DL_TFC0, DL_TFC6, DL_TFC9
4	DL_TFC4	UL_TFC1	DL_TFC0, DL_TFC6, DL_TFC10
5	DL_TFC5	UL_TFC1	DL_TFC0, DL_TFC6, DL_TFC11

Initial conditionsUE in idle modeTest procedureSub-test 1:

- a) The SS setup the radio bearer using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1. In downlink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.20 shall be used; and in uplink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12 shall be used.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 320 bits for RAB subflow#1.
- d) The SS transmits an RLC SDU of size 320 bits using transport format combination DL_TFC1 (1x320).
- e) The SS checks the content of the received RLC SDU.
- f) The SS open the UE test loop.

Sub-test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 640 bits for RAB subflow#1.
- i) The SS transmits an RLC SDU of size 640 bits using transport format combination DL_TFC2 (2x320).

j) The SS checks the content of the received RLC SDU.

k) The SS open the UE test loop.

Sub-test 3:

l) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

m) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1280 bits for RAB subflow#1.

n) The SS transmits an RLC SDU of size 1280 bits using transport format combination DL_TFC3 (4x320).

o) The SS checks the content of the received RLC SDU.

p) The SS open the UE test loop.

Sub-test 4:

q) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

r) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 2560 bits for RAB subflow#1.

s) The SS transmits an RLC SDU of size 2560 bits using transport format combination DL_TFC4 (8x320).

t) The SS checks the content of the received RLC SDU.

u) The SS open the UE test loop.

Sub-test 5:

v) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

x) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 5120 bits for RAB subflow#1.

y) The SS transmits an RLC SDU of size 5120 bits using transport format combination DL_TFC5 (16x320).

z) The SS checks the content of the received RLC SDU.

aa) The SS may optionally open the UE test loop.

bb) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u>
<u>2</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u>
<u>3</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 320 bits</u>
<u>4</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>5</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL TFC1:</u> <u>320 bits (TF1=1x320 bits)</u>
<u>6</u>	→		<u>UPLINK RLC SDU</u>	<u>UL TFC1:</u> <u>320 bits (TF1=1x576 bits)</u> <u>1xUL RLC PDU (320 bits + padding)</u>
<u>7</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>8</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>9</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u>
<u>10</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 640 bits</u>
<u>11</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>12</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL TFC2: 640 bits (TF2=2x320)</u>
<u>13</u>	→		<u>UPLINK RLC SDU</u>	<u>UL TFC1:</u> <u>640 bits (TF1=1x576 bits)</u> <u>2xUL RLC PDU, padding the 2nd RLC PDU</u>
<u>14</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>15</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>16</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u>
<u>17</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 1280 bits</u>
<u>18</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>19</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL TFC3:</u> <u>1280 bits (TF3=4x320 bits)</u>
<u>20</u>	→		<u>UPLINK RLC SDU</u>	<u>UL TFC1:</u> <u>1280 bits (TF1=1x576 bits)</u> <u>3xRLC PDUs, padding the 3rd RLC PDU</u>
<u>21</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>22</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>23</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u>
<u>24</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 2560 bits</u>
<u>25</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>26</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL TFC4:</u> <u>2560 bits (TF4=8x320 bits)</u>
<u>27</u>	→		<u>UPLINK RLC SDU</u>	<u>UL TFC1:</u> <u>2560 bits (TF1=1x576 bits)</u> <u>5xRLC PDUs, padding the 5th RLC PDU</u>
<u>28</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>29</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>30</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u>
<u>31</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 5120 bits</u>
<u>32</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>33</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL TFC5:</u> <u>5120 bits (TF5=16x320 bits)</u>
<u>34</u>	→		<u>UPLINK RLC SDU</u>	<u>UL TFC1:</u> <u>5120 bits (TF1=1x576 bits)</u> <u>9xRLC PDUs, padding the 9th RLC PDU</u>
<u>35</u>	←		<u>OPEN UE TEST LOOP</u>	<u>Optional step</u>

<u>36</u>	→	OPEN UE TEST LOOP COMPLETE	Optional step
<u>37</u>		RB RELEASE	Optional step

14.2.20.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
3. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
4. At step 20 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
5. At step 27 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
6. At step 34 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.2119 Streaming / unknown / UL:128 DL:0 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.21.1 Conformance requirement

See 14.2.4.1.

14.2.21.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.2119.

To be able to test the uplink radio bearer using the UE loopback function for the reference radio bearer UL:64 DL: 0 kbps, the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.1.12 (Conversational/unknown/UL:28.8 kbps) is used in downlink. For all sub-tests DL TFC1 is used.

14.2.21.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x320</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x320</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x320</u>	<u>N/A</u>
	<u>TF3, bits</u>	<u>4x320</u>	<u>N/A</u>
	<u>TF4, bits</u>	<u>8x320</u>	<u>N/A</u>
	<u>TF5, bits</u>	<u>16x320</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL TFC0</u>	<u>(TF0, TF0)</u>
<u>UL TFC1</u>	<u>(TF1, TF0)</u>
<u>UL TFC2</u>	<u>(TF2, TF0)</u>
<u>UL TFC3</u>	<u>(TF3, TF0)</u>
<u>UL TFC4</u>	<u>(TF4, TF0)</u>
<u>UL TFC5</u>	<u>(TF4, TF0)</u>
<u>UL TFC6</u>	<u>(TF0, TF1)</u>
<u>UL TFC7</u>	<u>(TF1, TF1)</u>
<u>UL TFC8</u>	<u>(TF2, TF1)</u>
<u>UL TFC9</u>	<u>(TF3, TF1)</u>
<u>UL TFC10</u>	<u>(TF4, TF1)</u>
<u>UL TFC11</u>	<u>(TF5, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	0x148
	TF2, bits	2x576	N/A

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL TFC0</u>	<u>(TF0, TF0)</u>
<u>DL TFC1</u>	<u>(TF1, TF0)</u>
<u>DL TFC2</u>	<u>(TF2, TF0)</u>
<u>DL TFC3</u>	<u>(TF0, TF1)</u>
<u>DL TFC4</u>	<u>(TF1, TF1)</u>
<u>DL TFC5</u>	<u>(TF2, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Uplink TFCS Under test</u>	<u>Downlink TFCS used to be able to return DL data</u>	<u>Implicitely tested</u>
<u>1</u>	<u>UL TFC1</u>	<u>DL TFC1</u>	<u>UL TFC0, UL TFC6, UL TFC7</u>
<u>2</u>	<u>UL TFC2</u>	<u>DL TFC1</u>	<u>UL TFC0, UL TFC6, UL TFC8</u>
<u>3</u>	<u>UL TFC3</u>	<u>DL TFC1</u>	<u>UL TFC0, UL TFC6, UL TFC9</u>
<u>4</u>	<u>UL TFC4</u>	<u>DL TFC1</u>	<u>UL TFC0, UL TFC6, UL TFC10</u>
<u>5</u>	<u>UL TFC5</u>	<u>DL TFC1</u>	<u>UL TFC0, UL TFC6, UL TFC11</u>

Initial conditionsUE in idle modeTest procedureSub-test 1:

- a) The SS setup the radio bearer using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1. In uplink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.21 shall be used; and in downlink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12 shall be used.
- b) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC1, UL TFC6, UL TFC7} for RAB subflow#1 using the RRC transport format combination control procedure.

- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 320 bits for RAB subflow#1.
- d) The SS transmits an RLC SDU of size 576 bits using transport format combination DL TFC1 (1x576).
- e) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- f) The SS open the UE test loop.

Sub-test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC2, UL TFC6, UL TFC8} for RAB subflow#1 using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 640 bits for RAB subflow#1.
- i) The SS transmits an RLC SDU of size 640 bits using transport format combination DL TFC1 (1x576).
- j) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- k) The SS open the UE test loop.

Sub-test 3:

- l) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC3, UL TFC6, UL TFC9} for RAB subflow#1 using the RRC transport format combination control procedure.
- m) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1280 bits for RAB subflow#1.
- n) The SS transmits an RLC SDU of size 1280 bits using transport format combination DL TFC1 (1x576).
- o) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- p) The SS open the UE test loop.

Sub-test 4:

- q) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC4, UL TFC6, UL TFC10} for RAB subflow#1 using the RRC transport format combination control procedure.
- r) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 2560 bits for RAB subflow#1.
- s) The SS transmits an RLC SDU of size 2560 bits using transport format combination DL TFC1 (1x576).
- t) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- u) The SS open the UE test loop.

Sub-test 5:

- v) The SS limits the UE allowed uplink transport format combinations to {UL TFC0, UL TFC5, UL TFC6, UL TFC11} for RAB subflow#1 using the RRC transport format combination control procedure.
- x) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 5120 bits for RAB subflow#1.
- y) The SS transmits an RLC SDU of size 5120 bits using transport format combination DL TFC1 (1x576).
- z) The SS checks the content of the received RLC SDU and that it is received by the correct transport format.
- aa) The SS may optionally open the UE test loop.
- bb) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u>
<u>2</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>Transport format combinations is limited to</u>
<u>3</u>	←		<u>CONTROL</u>	<u>{UL TFC0, UL TFC1, UL TFC6, UL TFC7}</u>
<u>4</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u>
<u>5</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>UL RLC SDU size = 320 bits</u>
<u>6</u>	←		<u>DOWNLINK RLC SDU</u>	<u>DL TFC1:</u>
<u>7</u>	→		<u>UPLINK RLC SDU</u>	<u>320 bits (TF1=1x576 bits)</u>
<u>8</u>	←		<u>OPEN UE TEST LOOP</u>	<u>1xRLC PDUs, padding</u>
<u>9</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>UL TFC1:</u>
<u>10</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>320 bits (TF1=1x320 bits)</u>
<u>11</u>	←		<u>CONTROL</u>	<u>Transport format combinations is limited to</u>
<u>12</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>{UL TFC0, UL TFC2, UL TFC6, UL TFC8}</u>
<u>13</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>UE test loop mode 1 is closed using</u>
<u>14</u>	←		<u>DOWNLINK RLC SDU</u>	<u>UL RLC SDU size = 640 bits</u>
<u>15</u>	→		<u>UPLINK RLC SDU</u>	<u>DL TFC1:</u>
<u>16</u>	←		<u>OPEN UE TEST LOOP</u>	<u>640 bits (TF1=1x576 bits)</u>
<u>17</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>2 x RLC PDUs, padding the 2nd RLC PDU</u>
<u>18</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>UL TFC2:</u>
<u>19</u>	←		<u>CONTROL</u>	<u>640 (TF2=2x320 bits)</u>
<u>20</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>Transport format combinations is limited to</u>
<u>21</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>{UL TFC0, UL TFC3, UL TFC6, UL TFC9}</u>
<u>22</u>	←		<u>DOWNLINK RLC SDU</u>	<u>UE test loop mode 1 is closed using</u>
<u>23</u>	→		<u>UPLINK RLC SDU</u>	<u>UL RLC SDU size = 1280 bits</u>
<u>24</u>	←		<u>OPEN UE TEST LOOP</u>	<u>DL TFC1:</u>
<u>25</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>1280 bits (TF1=1x576 bits)</u>
<u>26</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>3 x RLC PDUs, padding the 3rd RLC PDU</u>
<u>27</u>	←		<u>CONTROL</u>	<u>UL TFC3:</u>
<u>28</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>1280 bits (TF3=4x320 bits)</u>
<u>29</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>Transport format combinations is limited to</u>
<u>30</u>	←		<u>DOWNLINK RLC SDU</u>	<u>{UL TFC0, UL TFC4, UL TFC6,</u>
<u>31</u>	→		<u>UPLINK RLC SDU</u>	<u>UL TFC10}</u>
<u>32</u>	←		<u>OPEN UE TEST LOOP</u>	<u>UE test loop mode 1 is closed using</u>
<u>33</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>UL RLC SDU size = 2560 bits</u>
<u>34</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>DL TFC1:</u>
<u>35</u>	←		<u>CONTROL</u>	<u>2560 bits (TF1=1x576 bits)</u>
<u>36</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>5 x RLC PDUs, padding the 5th RLC PDU</u>
<u>37</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>UL TFC4:</u>
<u>38</u>	←		<u>DOWNLINK RLC SDU</u>	<u>2560 bits (TF4=8x320 bits)</u>
<u>39</u>	→		<u>UPLINK RLC SDU</u>	<u>Transport format combinations is limited to</u>
<u>40</u>	←		<u>OPEN UE TEST LOOP</u>	<u>{UL TFC0, UL TFC5, UL TFC6,</u>
<u>41</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>UL TFC11}</u>
<u>42</u>	←		<u>TRANSPORT FORMAT COMBINATION</u>	<u>UE test loop mode 1 is closed using</u>
<u>43</u>	←		<u>CONTROL</u>	<u>UL RLC SDU size = 5120 bits</u>
<u>44</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>DL TFC1:</u>
<u>45</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u>	<u>5120 bits (TF1=1x576 bits)</u>
<u>46</u>	←		<u>DOWNLINK RLC SDU</u>	<u>9 x RLC PDUs, padding the 9th RLC PDU</u>

<u>34</u>	<u>→</u>	<u>UPLINK RLC SDU</u>	<u>UL TFC5:</u>
<u>35</u>	<u>←</u>	<u>OPEN UE TEST LOOP</u>	<u>5120 bits (TF5=16x320 bits)</u>
<u>36</u>	<u>→</u>	<u>OPEN UE TEST LOOP COMPLETE</u>	<u>Optional step</u>
<u>37</u>		<u>RB RELEASE</u>	<u>Optional step</u>

14.2.21.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE transmitted transport format on RAB subflow#1 shall be TF1 (1x320).
3. At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
4. At step 13 the UE transmitted transport format on RAB subflow#1 shall be TF2 (2x320).
5. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
6. At step 20 the UE transmitted transport format on RAB subflow#1 shall be TF3 (4x320).
7. At step 20 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
8. At step 27 the UE transmitted transport format on RAB subflow#1 shall be TF4 (8x320).
9. At step 27 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
10. At step 34 the UE transmitted transport format on RAB subflow#1 shall be TF5 (16x320).
11. At step 34 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.22 Streaming / unknown / UL:0 DL:384 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.22.1 Conformance requirement

See 14.2.4.1.

14.2.22.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.20.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL: 128 kbps., the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.1.12 (Conversational/unknown/UL:28.8 kbps) is used in uplink. For all sub-tests UL TFC1 is used.

14.2.22.3 Method of test

Uplink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x576</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x576</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x576</u>	<u>N/A</u>

Uplink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>UL_TFC0</u>	<u>(TF0, TF0)</u>
<u>UL_TFC1</u>	<u>(TF1, TF0)</u>
<u>UL_TFC2</u>	<u>(TF2, TF0)</u>
<u>UL_TFC3</u>	<u>(TF0, TF1)</u>
<u>UL_TFC4</u>	<u>(TF1, TF1)</u>
<u>UL_TFC5</u>	<u>(TF2, TF1)</u>

Downlink TFS:

	<u>TFI</u>	<u>RAB subflow #1</u>	<u>DCCH</u>
<u>TFS</u>	<u>TF0, bits</u>	<u>0x320</u>	<u>0x148</u>
	<u>TF1, bits</u>	<u>1x320</u>	<u>0x148</u>
	<u>TF2, bits</u>	<u>2x320</u>	<u>N/A</u>
	<u>TF3, bits</u>	<u>4x320</u>	<u>N/A</u>
	<u>TF4, bits</u>	<u>8x320</u>	<u>N/A</u>
	<u>TF5, bits</u>	<u>16x320</u>	<u>N/A</u>
	<u>TF6, bits</u>	<u>32x320</u>	<u>N/A</u>
	<u>TF7, bits</u>	<u>48x320</u>	<u>N/A</u>

Downlink TFCS:

<u>TFCI</u>	<u>(RAB subflow#1, DCCH)</u>
<u>DL_TFC0</u>	<u>(TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0)</u>
<u>DL_TFC2</u>	<u>(TF2, TF0)</u>
<u>DL_TFC3</u>	<u>(TF3, TF0)</u>
<u>DL_TFC4</u>	<u>(TF4, TF0)</u>
<u>DL_TFC5</u>	<u>(TF5, TF0)</u>
<u>DL_TFC6</u>	<u>(TF6, TF0)</u>
<u>DL_TFC7</u>	<u>(TF7, TF0)</u>
<u>DL_TFC8</u>	<u>(TF0, TF1)</u>
<u>DL_TFC9</u>	<u>(TF1, TF1)</u>
<u>DL_TFC10</u>	<u>(TF2, TF1)</u>
<u>DL_TFC11</u>	<u>(TF3, TF1)</u>
<u>DL_TFC12</u>	<u>(TF4, TF1)</u>
<u>DL_TFC13</u>	<u>(TF5, TF1)</u>
<u>DL_TFC14</u>	<u>(TF6, TF1)</u>
<u>DL_TFC15</u>	<u>(TF7, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCS Under test</u>	<u>Uplink TFCS used to be able to return DL data</u>	<u>Implicitely tested</u>
<u>1</u>	<u>DL_TFC1</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC8, DL_TFC9</u>
<u>2</u>	<u>DL_TFC2</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC8, DL_TFC10</u>
<u>3</u>	<u>DL_TFC3</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC8, DL_TFC11</u>
<u>4</u>	<u>DL_TFC4</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC8, DL_TFC12</u>
<u>5</u>	<u>DL_TFC5</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC8, DL_TFC13</u>
<u>6</u>	<u>DL_TFC5</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC8, DL_TFC14</u>
<u>7</u>	<u>DL_TFC5</u>	<u>UL_TFC1</u>	<u>DL_TFC0, DL_TFC8, DL_TFC15</u>

Initial conditionsUE in idle mode

Test procedureSub-test 1:

- a) The SS setup the radio bearer using the generic procedure for UE radio bearer test mode activation according to clause 14.1.1. In downlink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.22 shall be used; and in uplink the reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12 shall be used.
- b) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- c) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 320 bits for RAB subflow#1.
- d) The SS transmits an RLC SDU of size 320 bits using transport format combination DL_TFC1 (1x320).
- e) The SS checks the content of the received RLC SDU.
- f) The SS open the UE test loop.

Sub-test 2:

- g) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- h) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 640 bits for RAB subflow#1.
- i) The SS transmits an RLC SDU of size 640 bits using transport format combination DL_TFC2 (2x320).
- j) The SS checks the content of the received RLC SDU.
- k) The SS open the UE test loop.

Sub-test 3:

- l) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- m) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 1280 bits for RAB subflow#1.
- n) The SS transmits an RLC SDU of size 1280 bits using transport format combination DL_TFC3 (4x320).
- o) The SS checks the content of the received RLC SDU.
- p) The SS open the UE test loop.

Sub-test 4:

- q) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- r) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 2560 bits for RAB subflow#1.
- s) The SS transmits an RLC SDU of size 2560 bits using transport format combination DL_TFC4 (8x320).
- t) The SS checks the content of the received RLC SDU.
- u) The SS open the UE test loop.

Sub-test 5:

- v) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.
- x) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 5120 bits for RAB subflow#1.

y) The SS transmits an RLC SDU of size 5120 bits using transport format combination DL_TFC5 (16x320).

z) The SS checks the content of the received RLC SDU.

aa) The SS open the UE test loop.

Sub-test 6:

bb) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

cc) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 10240 bits for RAB subflow#1.

dd) The SS transmits an RLC SDU of size 5120 bits using transport format combination DL_TFC6 (32x320).

ee) The SS checks the content of the received RLC SDU.

ff) The SS open the UE test loop.

Sub-test 7:

gg) The SS limits the UE allowed uplink transport format combinations to {UL_TFC0, UL_TFC1, UL_TFC4} for RAB subflow#1 using the RRC transport format combination control procedure.

hh) The SS close the test loop using UE test loop mode 1 setting UL RLC SDU size to 15360 bits for RAB subflow#1.

ii) The SS transmits an RLC SDU of size 5120 bits using transport format combination DL_TFC5 (48x320).

kk) The SS checks the content of the received RLC SDU.

ll) The SS may optionally open the UE test loop.

mm) The SS may optionally release the radio bearer.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>			<u>UE Radio Bearer Test Mode Activation</u>	<u>See generic procedures in clause 14.1.1</u> <u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 320 bits</u>
<u>2</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	
<u>3</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>4</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	<u>DL TFC1:</u> <u>320 bits (TF1=1x320 bits)</u> <u>UL TFC1:</u> <u>320 bits (TF1=1x576 bits)</u> <u>1xUL RLC PDU (320 bits + padding)</u>
<u>5</u>	←		<u>DOWNLINK RLC SDU</u>	
<u>6</u>	→		<u>UPLINK RLC SDU</u>	
<u>7</u>	←		<u>OPEN UE TEST LOOP</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 640 bits</u>
<u>8</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>9</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	
<u>10</u>	←		<u>CLOSE UE TEST LOOP</u>	<u>DL TFC2: 640 bits (TF2=2x320)</u> <u>UL TFC1:</u> <u>640 bits (TF1=1x576 bits)</u> <u>2xUL RLC PDU, padding the 2nd RLC PDU</u>
<u>11</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>12</u>	←		<u>DOWNLINK RLC SDU</u>	
<u>13</u>	→		<u>UPLINK RLC SDU</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 1280 bits</u>
<u>14</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>15</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>16</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	<u>DL TFC3:</u> <u>1280 bits (TF3=4x320 bits)</u> <u>UL TFC1:</u> <u>1280 bits (TF1=1x576 bits)</u> <u>3xRLC PDUs, padding the 3rd RLC PDU</u>
<u>17</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>18</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>19</u>	←		<u>DOWNLINK RLC SDU</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 2560 bits</u>
<u>20</u>	→		<u>UPLINK RLC SDU</u>	
<u>21</u>	←		<u>OPEN UE TEST LOOP</u>	
<u>22</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	<u>DL TFC4:</u> <u>2560 bits (TF4=8x320 bits)</u> <u>UL TFC1:</u> <u>2560 bits (TF1=1x576 bits)</u> <u>5xRLC PDUs, padding the 5th RLC PDU</u>
<u>23</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	
<u>24</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>25</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	<u>Transport format combinations is limited to</u> <u>{UL TFC0, UL TFC1, UL TFC4}</u> <u>UE test loop mode 1 is closed using</u> <u>UL RLC SDU size = 5120 bits</u>
<u>26</u>	←		<u>DOWNLINK RLC SDU</u>	
<u>27</u>	→		<u>UPLINK RLC SDU</u>	
<u>28</u>	←		<u>OPEN UE TEST LOOP</u>	<u>DL TFC5:</u> <u>5120 bits (TF5=16x320 bits)</u> <u>UL TFC1:</u> <u>5120 bits (TF1=1x576 bits)</u> <u>9xRLC PDUs, padding the 9th RLC PDU</u>
<u>29</u>	→		<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>30</u>	←		<u>TRANSPORT FORMAT COMBINATION</u> <u>CONTROL</u>	
<u>31</u>	←		<u>CLOSE UE TEST LOOP</u>	
<u>32</u>	→		<u>CLOSE UE TEST LOOP COMPLETE</u> <u>(DCCH)</u>	
<u>33</u>	←		<u>DOWNLINK RLC SDU</u>	
<u>34</u>	→		<u>UPLINK RLC SDU</u>	
<u>35</u>	←		<u>OPEN UE TEST LOOP</u>	

<u>36</u>	→	<u>OPEN UE TEST LOOP COMPLETE</u>	<u>Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC4}</u>
<u>37</u>	←	<u>TRANSPORT FORMAT COMBINATION CONTROL</u>	
<u>38</u>	←	<u>CLOSE UE TEST LOOP</u>	
<u>39</u>	→	<u>CLOSE UE TEST LOOP COMPLETE (DCCH)</u>	<u>UE test loop mode 1 is closed using UL RLC SDU size = 10240 bits</u>
<u>40</u>	←	<u>DOWNLINK RLC SDU</u>	
<u>41</u>	→	<u>UPLINK RLC SDU</u>	
<u>42</u>	←	<u>OPEN UE TEST LOOP</u>	<u>DL_TFC6: 10240 bits (TF6=32x320 bits)</u>
<u>43</u>	→	<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>44</u>	←	<u>TRANSPORT FORMAT COMBINATION CONTROL</u>	
<u>45</u>	←	<u>CLOSE UE TEST LOOP</u>	<u>UL_TFC1: 10240 bits (TF1=1x576 bits)</u>
<u>46</u>	→	<u>CLOSE UE TEST LOOP COMPLETE (DCCH)</u>	
<u>47</u>	←	<u>DOWNLINK RLC SDU</u>	
<u>48</u>	→	<u>UPLINK RLC SDU</u>	<u>18xRLC PDUs, padding the 18th RLC PDU</u>
<u>49</u>	←	<u>OPEN UE TEST LOOP</u>	
<u>50</u>	→	<u>OPEN UE TEST LOOP COMPLETE</u>	
<u>51</u>		<u>RB RELEASE</u>	<u>Optional step</u>

Transport format combinations is limited to {UL_TFC0, UL_TFC1, UL_TFC4}
UE test loop mode 1 is closed using UL RLC SDU size = 15360 bits

DL_TFC7: 15360 bits (TF7=48x320 bits)
UL_TFC1: 15360 bits (TF1=1x576 bits)
27xRLC PDUs, padding the 27th RLC PDU

Optional step
Optional step
Optional step

14.2.22.4 Test requirements

1. At step 1 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 6 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
3. At step 13 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
4. At step 20 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
5. At step 27 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
6. At step 34 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
7. At step 41 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.
8. At step 48 the UE shall return an RLC SDU on RAB subflow#1 with the same content as sent by SS.

14.2.23.1 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.23.1 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.231 for the uplink 10 ms TTI case.

**14.2.23.2 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH / 20 ms TTI**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.23 for the uplink 20 ms TTI case.

**14.2.24.2 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.24.

**14.2.25.3 Interactive or background / UL:32 DL: 64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.25.

**14.2.26.4 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.26.

**14.2.27.5 Interactive or background / UL:64 DL:128 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.27.

**14.2.28.6 Interactive or background / UL:128 DL:128 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.28.

**14.2.29.7 Interactive or background / UL:64 DL:144 kbps / PS RAB +
UL:3.4 DL: 3.4 kbps SRBs for DCCH**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.29.

**14.2.30.8 Interactive or background / UL:144 DL:144 kbps / PS RAB +
UL:3.4 DL: 3.4 kbps SRBs for DCCH**

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.30.

14.2.31 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

14.2.31.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.31 for the downlink 10 ms TTI case.

14.2.31.2 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 20 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.31 for the downlink 20 ms TTI case.

14.2.32~~29~~ Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

~~Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.29.~~

14.2.32.1 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.32 for the 10 ms TTI case.

14.2.32.2 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 20 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.32 for the 20 ms TTI case.

14.2.33~~30~~ Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

~~Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.30.~~

14.2.33.1 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.33 for the 10 ms TTI case.

14.2.33.2 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.33 for the 20 ms TTI case.

~~14.2.3431~~ Interactive or background / UL:384 DL:384 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.31.~~

14.2.34.1 Interactive or background / UL:384 DL:384 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.34 for the 10 ms TTI case.

14.2.34.2 Interactive or background / UL:384 DL:384 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.34. for the 20 ms TTI case

~~14.2.3532~~ Interactive or background / UL:64 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.35.1 Interactive or background / UL:64 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.352 for the 10 ms TTI case.

14.2.35.2 Interactive or background / UL:64 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.35 for the 20 ms TTI case.

~~14.2.3633~~ Interactive or background / UL:128 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.363.~~

~~14.2.3734~~ Interactive or background / UL:384 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.34.~~

14.2.37.1 Interactive or background / UL:384 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.37 for the 10 ms TTI case.

14.2.37.2 Interactive or background / UL:384 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.37 for the 20 ms TTI case.

14.2.3835 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.385.

14.2.3936 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:32 DL:64 kbps / PS RAB+ UL:3.4
DL: 3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.396.

14.2.4037 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:64 kbps / PS RAB+ UL:3.4
DL: 3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.4037.

14.2.4138 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.4138.

14.2.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.42.

14.2.4339 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.39.

14.2.43.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH / 10 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.43 for the 10 ms TTI case.

14.2.43.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH / 20 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.43 for the 20 ms TTI case.

14.2.44.0 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:128 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.44.

14.2.45.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.45.

14.2.46.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.46.

14.2.47.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4
kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.47.

14.2.48.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:0 DL:384 kbps / CS RAB + UL:3.4 DL:3.4
kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.48.

14.2.~~4945~~ Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.~~4945~~.

14.2.~~5046~~ Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.~~5046~~.

14.2.~~5147~~ Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.~~5147~~.

14.2.~~5248~~ Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.~~5248~~.

14.2.~~5349~~ Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.~~5349~~.

14.2.~~5450~~ Interactive or background / UL:64 DL:128 kbps / PS RAB +
Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.~~5450~~.

14.2.~~5551~~ Interactive or background / UL:64 DL:128 kbps / PS RAB +
Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.~~5551~~.

14.3 Combinations on PDSCH and DPCH

14.3.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.1.

14.3.2 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.2.

14.3.3 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.3.

14.3.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.4.

14.3.5 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.5.

14.3.6 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.6.

14.4 Combinations on SCCPCH

14.4.1 Stand-alone signalling RB for PCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.3.1.

14.4.2 Interactive/Background 32 kbps PS RAB + ~~50.4 kbps~~ SRBs for CCCH + ~~13.6 kbps~~ SRB for DCCH + SRB for BCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.3.2.

14.4.3 Interactive/Background 32 kbps RAB + SRBs for PCCH + ~~50.4 kbps~~ SRB for CCCH + ~~13.6 kbps~~ SRB for DCCH + SRB for BCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.3.3.

14.5 Combinations on PRACH

14.5.1 Interactive/Background 32 kbps PS RAB + ~~16.6 kbps~~ SRB for CCCH + ~~13.6 kbps~~ SRB for DCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.4.1.

3GPP/T1 #8
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for approval

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for information

☐

strategic

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(for SMG

non-strategic

☒

use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ☐

ME ☒

UTRAN / Radio ☐

Core Network ☐

Source:

MCC task 161

Date:

25 Aug 00

Subject:

MAC tests

Work item:

Category:

(only one category
shall be marked
with an X)

F Correction

A Corresponds to a correction in an earlier release

B Addition of feature

C Functional modification of feature

D Editorial modification

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Release:

Phase 2

Release 96

Release 97

Release 98

Release 99

Release 00

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**Reason for
change:**

New MAC test cases are added.

Clauses affected:

3G TS 34.123-1 clauses 7.1.8 – 7.1.13

**Other specs
affected:**

Other 3G core specifications

Other GSM core

specifications

MS test specifications

BSS test specifications

O&M specifications

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→ List of CRs:

→ List of CRs:

→ List of CRs:

→ List of CRs:

→ List of CRs:

**Other
comments:**

The following test cases are added:

7.1.8.1 DCCH mapped to RACH/FACH

7.1.8.2 DTCH or DCCH mapped to DSCH or USCH

7.1.8.3 DTCH or DCCH mapped to CPCH

7.1.8.4 DTCH or DCCH mapped to DCH

7.1.8.5 CCCH mapped to RACH/FACH

7.1.8.6 DTCH mapped to RACH/FACH

7.1.9.1 Selection of Transport Format depending on instantaneous source rate

7.1.10.1 Priority handling between data flows of one UE

7.1.11.1 Ciphering for transparent RLC

7.1.12.1 Access Service Class selection for RACH and CPCH transmission

7.1.12.2 Control of RACH transmissions for FDD mode

7.1.13.1 Control of CPCH transmissions for FDD mode

7 Layer 2

7.1 MAC

General

If not otherwise mentioned, the same procedures as used in RRC test specification (TS 34.123-1) or in the Generic procedure (TS 34.108) applies to reach Initial conditions for MAC testing.

If not explicitly described, the same message contents and settings are applied as described in the RRC test description default settings.

7.1.8 Mapping between logical channels and transport channels

~~For the test cases where is a which need to send data block(s) to the UE and a need to read loop back data block(s) from the UE, it is necessary for the SS to send a RLC_CONFIG_REQ primitive to set up a RLC entity of the System Simulator in transparent mode, and it sends a CMAC_MAC_HEADER_REQ primitive with disable_mac_header to set the MAC entity of the system simulator as transparent mode, and the data block header information is defined in the TTCN to ensure that it is interpreted correctly by the UE. The SS receives or sends data block(s) with the RLC/MAC header (if applied) from RLC_PCO.~~

~~This same test method is applied for to the MAC test cases as described in 7.1.9 to 7.1.13.~~

7.1.8.1 DCCH mapped to RACH/FACH

7.1.8.1.1 Definition and applicability

~~All UE.~~

7.1.8.1.2 Conformance requirement

TCTF field, C/T field, UE-Id type field and UE-Id are included in the MAC header.

Reference(s)

TS 25.321 clause 9.2.1.1.

7.1.8.1.3 Test purpose

To verify that the TCTF field, C/T field, UT-Id type and UE-Id field are correctly applied when a DCCH is mapped to the RACH/FACH

7.1.8.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

The UE is in Connected mode and a connection is established as described in the RRC connection establishment procedure is completed as specified in TS 34.108, clause 7.1.2.

~~RRC connection establishment procedure is completed as specified in TS34.108 7.1.2.~~

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

TBD

Test procedure

- a) After having performed a packet switched connection establishment the SS sets up a Radio Bearer – The SS transmits a RADIO BEARER SET UP message to establish a signalling radio bearer with DCCH mapping to RACH.
- b) The SS receives RADIO BEARER COMPLETE. The UE shall confirm the Radio Bearer configurations.
- c) The SS sends RNTI REALLOCATION to assign a new C_RNTI. The SS starts the Reallocation procedure to assign a new C_RNTI.
- d) The SS receives RNTI REALLOCATION COMPLETE from DCCH, SS checks the MAC header. After having received the newly assigned C_RNTI parameter, the UE shall confirm the completion of this procedure.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		RADIO BEARER SETUP	Establish Signalling Radio Bearer.
2	→		RADIO BEARER SETUP COMPLETE	
3	←		RNTI REALLOCATION	Assign an new C_RNTI.
4	→		RNTI REALLOCATION COMPLETE	<u>This message shall be send on the DCCH.</u> ~~The SS checks the MAC header.~~

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RB mapping info	
- Number of Logical channels	1
- Transport channel type	RACH.

7.1.8.1.5 Test Requirement

The UE shall confirm reallocation procedure by sending the RNTI REALLOCATION COMPLETE message. The message shall be returned on the configured channel on MAC level. This shall verify, that the mapped channels are used as configured.

The SS checks the MAC Header of RNTI REALLOCATION COMPLETE, CTCF shall be "DCCH or DTCH over RACH", C/T field shall exist, UE ID type and UE ID shall correspond to step 3.

7.1.8.2 DTCH or DCCH mapped to DSCH or USCH

7.1.8.2.1 Definition and applicability

Applicable for if mode TDD only or FDD only is supported.

7.1.8.2.2 Conformance requirement

The TCTF field is included in the MAC header for TDD only. The UE-Id type and UE-Id are included in the MAC header for FDD only. The C/T field is included if multiplexing on MAC is applied.

Reference(s)

TS 25.321 clause 9.2.1.1.

7.1.8.2.3 Test purpose

To verify when DTCH or DCCH is mapped to DSCH or USCH, the TCTF field is applied for TDD only, the UE-Id type and UE-Id are applied for FDD only. If multiplexing on MAC is applied, C/T field is included, otherwise, the C/T field is not included in the MAC header.

7.1.8.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters. Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1). RRC connection establishment procedure is completed as specified in TS34.108 7.1.2.

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

~~a) The SS sends RADIO BEARER SETUP message to set up a downlink Radio Bearer with DTCH mapping to DSCH and an uplink Radio Bearer with DTCH mapping to USCH.~~

~~e) The SS receives the uplink message RADIO BEARER SETUP COMPLETE. The SS sends CLOSE UE TEST LOOP.~~

~~d) The SS receives CLOSE UE TEST LOOP COMPLETE.~~

~~e) The SS sends C-MAC-REQ with disable_mac_header via C-MAC-PCO, and C-RLC-CONFIG-REQ with RLC mode as "Transparent Mode" via C-RLC-PCO.~~

~~f) a) The SS sends a certain data block to the UE, via downlink Radio Bearer with MAC header, set TCTF as "DCCH or DTCH over USCH or DSCH" for TDD only, set UE-Id type as "C-RNTI", and UE-Id as C-RNTI of UE for FDD only.~~

- b) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- ~~g)c)~~ The SS receives the ~~loop-back returned~~ data block and checks its MAC header whether the TCTF is applied for TDD only, or the UE-Id type and UE-Id are applied for FDD only, and the C/T field shall not be isn't applied.
- d) The SS configures the RLC
- ~~h)~~ The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.
- ~~i)e)~~ The SS starts a Radio Bearer Reconfiguration procedure to be connected in RLC transparent mode and configures the Radio Bearer for ~~sends RADIO BEARER RECONFIGURE message to reconfigure uplink and downlink radio bearer as~~ multiplexing.
- ~~j)f)~~ The SS receives RADIO BEARER RECONFIGURE COMPLETE.
- ~~k)~~ The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.
- ~~l)g)~~ The SS sends a certain data block to the UE, via downlink Radio Bearer and sets MAC header TCTF as "DCCH or DTCH over USCH or DSCH" for TDD only, or sets UE-Id type as "C-RNTI", and UE-Id as C-RNTI of UE for FDD only and C/T field is included.
- ~~h)~~ After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- ~~m)i)~~ The SS receives the returned loop-back data block via uplink Radio Bearer and check its MAC header whether the TCTF is applied for TDD only, or the UE-Id type and UE-Id are applied for FDD only and the C/T field is applied.
- i) The SS reconfigures its RLC mode to be in AM.
- ~~n)~~ The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.
- ~~o)~~ The SS sends RADIO BEARER RELEASE to release the established uplink and downlink RBs.
- ~~p)~~ The SS receives RADIO BEARER RELEASE COMPLETE.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	RADIO BEARER SETUP	Set up a Downlink Radio Bearer with DTCH mapped to DSCH and set up an uplink radio bearer with DTCH mapped to USCH.
2		→	RADIO BEARER SETUP COMPLETE	
3		←	CLOSE UE TEST LOOP	
4		→	CLOSE UE TEST LOOP COMPLETE	
5				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
16		←	DATA BLOCK	The SS sends one data block with MAC header, sets TCTF as "DCCH or DTCH over USCH or DSCH" for TDD only, or sets UE-Id type as "C-RNTI", and UE-Id as C-RNTI of UE for FDD only.
27		→	LOOP BACK DATA BLOCK	SS receives the loop back data block from the Uplink RB and checks the MAC header.
38				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
49		←	RADIO BEARER RECONFIGURE	Reconfigures the downlink and uplink radio bearer as multiplexing .
150		→	RADIO BEARER RECONFIGURATION COMPLETE	
116				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
127		←	DATA BLOCK	The SS sends one data block with MAC header, sets TCTF as "DCCH or DTCH over USCH or DSCH" for TDD only, or sets UE-Id type as "C-RNTI", and UE-Id as C-RNTI of UE for FDD only and C/T field is included.
138		→	LOOP BACK DATA BLOCK	SS receives the loop back data block from the Uplink RB and checks the MAC header.
149				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
15		←	RADIO BEARER RELEASE	To release the uplink and downlink radio bearers.
16		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB mapping info -Downlink - Number of logical channels - Downlink transport channel type	1 DSCH
-Uplink - Number of logical channels - Uplink transport channel type	1 USCH

RADIO BEARER RECONFIGURE:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB mapping info -Downlink - Number of logical channels - Downlink transport channel type	2 DSCH
-Uplink - Number of logical channels - Uplink transport channel type	2 USCH

7.1.8.2.5 Test requirements

TCTF field in the MAC header of loop back data block is "DTCH or DCCH over DSCH or USCH" for TDD only. The UE-ID type and UE-Id are applied in the MAC header for FDD only. If multiplexing on MAC is applied, C/T field is included, otherwise, C/T field is not included.

7.1.8.3 DTCH or DCCH mapped to CPCH

7.1.8.3.1 Definition and applicability

All UE.

7.1.8.3.2 Conformance requirement

UE-Id type field and UE-Id are included in the MAC header. The C/T field is included in the MAC header if multiplexing on MAC is applied.

Reference(s)

TS 25.321 subclause 9.2.1.1.

7.1.8.3.3 Test purpose

To verify when DTCH or DCCH mapped to CPCH, UE-Id type field and UE-Id are included in the MAC header. if multiplexing on MAC is applied, the C/T field is included in the MAC header, otherwise, C/T field is not included.

7.1.8.3.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

~~RRC connection establishment procedure is completed as specified in TS34.108 7.1.2. The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1).~~

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

- a) ~~The SS sends RADIO BEARER SETUP message to set up a downlink Radio Bearer with DTCH mapping to DSCH and an uplink Radio Bearer with DTCH mapping to CPCH.~~
- b) ~~The SS receives the uplink message RADIO BEARER SETUP COMPLETE.~~
- c) ~~SS sends CLOSE UE TEST LOOP~~
- d) a) The SS reconfigures its RLC mode to be in transparent mode RLC. Afterwards its sends a certain data block to the UE .The SS receives CLOSE UE TEST LOOP COMPLETE
- e) ~~The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- f) b) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS. The SS sends data block via the downlink Radio Bearer with MAC header, set UE-Id type as "C-RNTI" and UE-Id as C-RNTI of UE.
- g) c) The SS receives the returned data block and checks its MAC header, whether a UE-Id type and a UE-Id are included.
- h) d) The SS reconfigures its RLC mode to be in AM. The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.
- i) e) The SS starts a Radio Bearer Reconfiguration procedure to be connected in RLC transparent mode and configures the Radio Bearer for multiplexing. The SS sends RADIO BEARER RECONFIGURE message to reconfigure uplink and downlink radio-bearer as multiplexing.
- j) ~~The SS receives RADIO BEARER RECONFIGURE COMPLETE.~~
- k) ~~The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- l) f) The SS sends the next data block via downlink Radio Bearer its MAC entity with MAC header, sets including the UE-Id type as "C-RNTI" and UE-Id as C-RNTI of the UE. C/T field is included.
- m) g) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- n) ~~The SS receives the returned loop-back data block and checks its the MAC header, whether UE-Id type, UE-Id field are included and C/T field is applied or not.~~
- o) ~~The SS sends RADIO BEARER RELEASE to release the established uplink and downlink RBs.~~
- p) ~~The SS receives RADIO BEARER RELEASE COMPLETE.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
~~1~~		←	~~RADIO BEARER SETUP~~	~~Sets up a Downlink Radio Bearer with DTCH mapped to DSCH and sets up an uplink radio bearer with DTCH mapped to CPCH.~~
~~2~~		→	~~RADIO BEARER SETUP COMPLETE~~	
~~3~~		←	~~CLOSE UE TEST LOOP~~	
~~4~~		→	~~CLOSE UE TEST LOOP COMPLETE~~	
~~5~~				~~SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".~~
~~16~~		←	DATA BLOCK	The SS sends one data block with MAC header, sets UE-Id type as "C-RNTI", and UE-Id as C-RNTI of UE.
~~72~~		→	LOOP BACK DATA BLOCK	SS receives the loop back data block from the Uplink RB and checks the MAC header.
~~83~~				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
~~49~~		←	RADIO BEARER RECONFIGURE	Reconfigures the downlink and uplink radio bearer as multiplexing.
~~510~~		→	RADIO BEARER RECONFIGURATION COMPLETE	
~~611~~				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
~~712~~		←	DATA BLOCK	The SS sends one data block with MAC header, sets UE-Id type as "C-RNTI", and UE-Id as C-RNTI of UE.
~~813~~		→	LOOP BACK DATA BLOCK	SS receives the loop back data block from the Uplink RB and checks the MAC header.
~~914~~				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
~~15~~		←	~~RADIO BEARER RELEASE~~	~~To release the uplink and downlink radio bearers.~~
~~16~~		→	~~RADIO BEARER RELEASE COMPLETE~~	

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB mapping info -Downlink - Number of logical channels - Downlink transport channel type	1 DSCH
-Uplink - Number of logical channels - Uplink transport channel type	1 CPCH

RADIO BEARER RECONFIGURE:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB mapping info -Downlink - Number of logical channels - Downlink transport channel type	2 DSCH
-Uplink - Number of logical channels - Uplink transport channel type	2 CPCH

7.1.8.3.5 Test requirements

The UE-Id type and UE-Id field are included in the MAC header. When multiplexing on MAC is not applied, C/T field is included in the MAC header. Otherwise, C/T field is not included.

7.1.8.4 DTCH or DCCH mapped to DCH

7.1.8.4.1 Definition and applicability

All UE.

7.1.8.4.2 Conformance requirement

DTCH or DCCH mapped to DCH, no multiplexing of dedicated channels on MAC: -no MAC header is required.

DTCH or DCCH mapped to DCH, with multiplexing of dedicated channels on MAC: -C/T field is included in MAC header.

Reference(s)

TS 25.321 subclause 9.2.1.1.

7.1.8.4.3 Test purpose

To verify when DTCH or DCCH mapped to DCH, if multiplexing of dedicated channels on MAC is applied, C/T field is included in the MAC header, if multiplexing of dedicated channels on MAC isn't applied, no MAC header is included.

7.1.8.4.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

RRConnection establishment procedure is completed as specified in TS34.108 7.1.2. The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in UM RLC (using Loop back test mode 1)".

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

- a) ~~The SS sends RADIO BEARER SETUP message to set up a downlink Radio Bearer with DTCH mapping to DCH and an uplink Radio Bearer with DTCH mapping to DCH.~~
- b) ~~The SS receives the uplink message RADIO BEARER SETUP COMPLETE.~~
- e) ~~SS sends CLOSE UE TEST LOOP.~~
- d) ~~SS receives CLOSE UE TEST LOOP COMPLETE.~~
- e)a) The SS reconfigures its RLC mode to be in transparent mode RLC. Afterwards its sends a certain data block to the UE. SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.
- f)b) The SS sends a certain data block ~~via the downlink Radio Bearer~~ without MAC header.
- c) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- g)d) The SS receives the returned data block and checks its MAC header. The SS receives the loop-back data block and checks the MAC header whether MAC header is ~~not~~ included or not.
- h)e) The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.
- f)f) The SS starts a Radio Bearer Reconfiguration procedure to be connected in RLC transparent mode and configures the Radio Bearer for multiplexing. The SS sends RADIO BEARER RECONFIGURE message to reconfigure uplink and downlink radio bearer as multiplexing.
- j)g) The SS receives RADIO BEARER RECONFIGURE COMPLETE.
- q)i) The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.
- k)h) The SS sends a data block ~~via downlink Radio Bearer~~ with C/T field.
- i) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- l)j) The SS receives the loop-back data block and checks the MAC header. The SS receives the returned data block and checks its MAC header, whether C/T field is applied.
- m)j) The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.
- n) ~~The SS sends RADIO BEARER RELEASE to release the established uplink and downlink RBs.~~
- o) ~~The SS receives RADIO BEARER RELEASE COMPLETE.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
~~1~~		←	~~RADIO BEARER SETUP~~	~~Sets up a Downlink Radio Bearer with DTCH mapped to DCH and sets up an uplink radio bearer with DTCH mapped to DCH.~~
~~2~~		→	~~RADIO BEARER SETUP COMPLETE~~	
~~3~~		←	~~CLOSE UE TEST LOOP~~	
~~4~~		→	~~CLOSE UE TEST LOOP COMPLETE~~	
~~5~~				~~SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".~~
~~16~~		←	DATA BLOCK	The SS sends one data block without MAC header.
~~72~~		→	LOOP BACK DATA BLOCK	SS receives the loop back data block from the Uplink RB and checks whether MAC header is applied or not.
~~38~~				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
~~94~~		←	RADIO BEARER RECONFIGURE	Reconfigures the downlink and uplink radio bearer as multiplexing.
~~510~~		→	RADIO BEARER RECONFIGURATION COMPLETE	
~~611~~				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
~~712~~		←	DATA BLOCK	The SS sends one data block with C/T field.
~~813~~		→	LOOP BACK DATA BLOCK	SS receives the loop back data block from the Uplink RB and checks whether C/T field is applied or not.
~~914~~				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
~~15~~		←	~~RADIO BEARER RELEASE~~	~~To release the uplink and downlink radio bearers.~~
~~16~~		→	~~RADIO BEARER RELEASE COMPLETE~~	

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB mapping info -Downlink - Number of logical channels - Downlink transport channel type	1 DCH
-Uplink - Number of logical channels - Uplink transport channel type	1 DCH

RADIO BEARER RECONFIGURE:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB mapping info -Downlink - Number of logical channels - Downlink transport channel type	2 DCH
-Uplink - Number of logical channels - Uplink transport channel type	2 DCH

7.1.8.4.5 Test requirements

If multiplexing on MAC is applied, the C/T field is included in the MAC header, otherwise, the MAC header is not applied.

7.1.8.5 CCCH mapped to RACH/FACH

7.1.8.5.1 Definition and applicability

All UE.

7.1.8.5.2 Conformance requirement

TCTF field is included in the MAC header.

Reference(s)

TS 25.321 clause 9.2.1.1.

7.1.8.5.3 Test purpose

To verify that the TCTF field is included in MAC header when CCCH mapped to RACH/FACH.

7.1.8.5.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

- a) The SS broadcast SYSTEM INFORMATION
- b) The SS sends PAGING TYPE 1 to the page UE
- c) The SS receives the RRC CONNECTION REQUEST message on CCCH from UE. After having received the paging type 1 message, the UE asks for a RRC connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION	
2		←	PAGE TYPE 1	Page UE
3		→	RRC CONNECTION REQUEST	This message is transmitted on Uplink CCCH mapped to RACH, SS read the MAC header to checks whether the TCTF field is applied or not.

7.1.8.5.5 Test requirements

The TCTF field is applied to the MAC header of RRC CONNECTION REQUEST.

7.1.8.6 DTCH mapped to RACH/FACH

7.1.8.6.1 Definition and applicability

All UE.

7.1.8.6.2 Conformance requirement

TCTF field, C/T field, UE-Id type and UE-Id are included in the MAC header.

Reference(s)

TS 25.321 clause 9.2.1.1.

7.1.8.6.3 Test purpose

To verify that the TCTF field, C/T field, UE Id type and UE Id field are included in the MAC header when DTCH mapped to RACH/FACH.

7.1.8.6.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

RRC connection establishment procedure is completed as specified in TS34.108 7.1.2. The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1).

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

- a) The SS reconfigures its RLC mode to be in transparent mode RLC. Afterwards its sends a certain data block to the UE. The SS sends RADIO BEARER SETUP message to set up a downlink Radio Bearer with DTCH mapping to FACH and an uplink Radio Bearer with DTCH mapping to RACH.
- ~~b) The SS receives the uplink message RADIO BEARER SETUP COMPLETE.~~
- ~~c) SS sends CLOSE UE TEST LOOP.~~
- ~~d) The SS receives CLOSE UE TEST LOOP COMPLETE.~~
- ~~e) The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- f) The SS sends a certain data block with MAC header. The SS sends data block via the downlink Radio Bearer with MAC header, sets the TCTF as "DTCH or DCCH over FACH", the UE-Id type as "C-RNTI", the UE-Id as the C-RNTI of UE, and the C/T field as "Logical channel 1".
- c) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- ~~g) d) The SS receives the returned data block and checks its MAC header. The SS receives the loop back data block and checks the MAC header whether the TCTF field, C/T field, UE-Id type and UE-Id are included in the MAC header or not.~~
- ~~h) The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.~~
- ~~i) The SS sends RADIO BEARER RELEASE to release the established uplink and downlink RBs.~~
- ~~j) The SS receives RADIO BEARER RELEASE COMPLETE.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
~~1~~		←	~~RADIO-BEARER SETUP~~	~~Sets up a Downlink Radio Bearer with DTCH mapped to DCH and sets up an uplink radio bearer with DTCH mapped to DCH~~
~~2~~		→	~~RADIO-BEARER SETUP COMPLETE~~	
~~3~~		←	~~CLOSE UE TEST LOOP~~	
~~4~~		→	~~CLOSE UE TEST LOOP COMPLETE~~	
~~15~~				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode"
~~62~~		←	DATA BLOCK	The SS sends one data block with MAC header, TCTF set as "DTCH or DCCH over FACH", UE-Id type as "C-RNTI", UE-Id as C-RNTI of UE, C/T field as "Logical channel 1"
~~37~~		→	LOOP BACK DATA BLOCK	SS receives the loop back data block from the Uplink RB and checks whether MAC header is applied or not.
~~84~~				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode"
~~9~~		←	~~RADIO-BEARER RELEASE~~	~~To release the uplink and downlink radio bearers.~~
~~10~~		→	~~RADIO-BEARER RELEASE COMPLETE~~	

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB mapping info -Downlink - Number of logical channels - Downlink transport channel type	1 DCH
-Uplink - Number of logical channels - Uplink transport channel type	1 DCH

7.1.8.6.5 Test requirements

CTCF shall be "DCCH or DTCH over RACH", C/T field ,UE-Id type, UE-Id field are included in the MAC header.

7.1.9 Selection of appropriate Transport format for each Transport Channel depending on instantaneous source rate

7.1.9.1 Selection of Transport Format depending on instantaneous source rate

7.1.9.1.1 Definition and applicability

All UE.

7.1.9.1.2 Conformance requirement

Given the Transport Format combination set assigned by RRC, MAC selects the appropriate transport format within an assigned transport format set for each active transport channel depending on source rate. The control of transport formats ensures efficient use of transport channels.

Reference(s)

TS 25.321 subclause 25.301 5.3.1.2

7.1.9.1.3 Test purpose

To verify that appropriate transport format is selected for each transport channel depending on source rate.

7.1.9.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1), but for two Radio Bearer entities. Therefore two uplink- and downlink settings shall be configured. RRC connection establishment procedure is completed as specified in TS34.108 7.1.2.

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

Test procedure

- a) ~~The SS sends RADIO BEARER SETUP to establish 2 downlink Radio Access Bearers and 2 uplink Radio Access Bearers with different data rate.~~
- b) ~~The UE response the RADIO BEARER SET UP COMPLETE.~~
- e) ~~The SS sends CLOSE UE TEST LOOP.~~
- d) ~~The SS receives CLOSE UE TEST LOOP COMPLETE~~
- k) ~~The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- e) a) The SS sends certain data blocks.
- b) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- d) c) The SS receives the loop back returned data and read the TFCI which indicate the Transport Format.

g)d) The SS checks that high data rate RBs have a high bit rate Transport Format.

h)The SS sends ~~CMAC_MAC_HEADER_REQ~~ with ~~enable_mac_header~~ via ~~CMAC_PCO~~, and ~~CRLC_CONFIG_REQ~~ with ~~RLC mode as "AM Mode"~~ via ~~CRLC_PCO~~.

m)The SS sends ~~RADIO BEARER RELEASE~~ to release the established uplink and downlink RBs.

n)e) The SS reconfigures its RLC mode to be in AM RLC. The SS receives RADIO BEARER RELEASE COMPLETE.

o)f) RepeatThe step a) to en) for ~~repeat with~~ different data rates.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
<u>1</u>		←	RADIO BEARER SET UP	Establish 2 uplink Radio and 2 Downlink Radio Bearer.
<u>2</u>		→	~~RADIO BEARER SET UP COMPLETE~~	
<u>3</u>		←	~~CLOSE UE TEST LOOP~~	Set up the loop back.
<u>4</u>		→	~~CLOSE UE TEST LOOP COMPLETE~~	
<u>15</u>				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" <u>for each Radio Bearer.</u>
<u>26</u>	←		DATA BLOCKS	
<u>37</u>	→		LOOP BACK DATA BLOCKS	Read the Transfer Format of loop back data blocks, the high bit transfer format apply to the Radio Bearer with high data rate.
<u>48</u>				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode".
<u>9</u>	←		~~RADIO BEARER RELEASE~~	<u>Releases the existing radio bearers.</u>
<u>10</u>	→		~~RADIO BEARER RELEASE COMPLETE~~	
<u>511</u>				The step 1 to 10 <u>shall be repeated for</u> ~~with~~ different data rates.

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RLC info - RLC mode	AM RLC
RB1 - TTI - Downlink - Number of logical channels - Downlink transport channel type	10ms 1 DCH
RB2 - TTI - Uplink - Number of logical channels - Uplink transport channel type	10ms 1 DCH
RB3 - TTI - Downlink - Number of logical channels - Downlink transport channel type	80ms 1 DCH
RB4 - TTI - Uplink - Number of logical channels - Uplink transport channel type	80ms 1 DCH
TFS	TF0 (1X366) TF1 (2X366) TF2 (4X366) TF3 (8X366)

7.1.9.1.5 Test requirements

The "High bit rate" TF is applied to the high data rate Radio Bearer. That is, the bit rate of TF in RB2 should be not less than RB4.

7.1.10 Priority handling between data flows of one UE

7.1.10.1 Priority handling between data flows of one UE

7.1.10.1.1 Definition and applicability

All UE.

7.1.10.1.2 Conformance requirement

When selecting between the Transport Format Combinations in the given Transport Format Combination Set, priorities of the data flows to be mapped onto the corresponding Transport Channels can be taken into account.

Reference(s)

TS 25.301 subclause 5.3.1.2.

7.1.10.1.3 Test purpose

To verify that the priority between data flows of one UE was correctly handled.

7.1.10.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1), but for two Radio Bearer entities. Therefore two uplink- and downlink settings shall be configured. RRC connection establishment procedure is completed as specified in TS34.108 7.1.2.

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

- ~~a) The SS sends RADIO BEARER SETUP to establish 2 downlink Radio Access Bearers and 2 uplink Radio Access Bearers with different MAC logical channel priority.~~
- ~~b) The UE response the RADIO BEARER SET UP COMPLETE.~~
- ~~c) The SS sends CLOSE UE TEST LOOP.~~
- ~~d) The SS receives CLOSE UE TEST LOOP COMPLETE.~~
- ~~e) The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- ~~f) The SS sends data blocks.~~
- ~~g) The SS receives the loop back data and read TFCI which indicate the Transport Format.~~
- ~~h) The SS checks high priority RB have high bit rate Transport Format.~~
- ~~i) The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM Mode" via CRLC_PCO.~~
- ~~j) The SS sends RADIO BEARER RELEASE to release the established uplink and downlink RBs.~~
- ~~k) The SS receives RADIO BEARER RELEASE COMPLETE.~~
- a) The SS sends certain data blocks.
- b) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.
- c) The SS receives the returned data and read the TFCI which indicate the Transport Format.
- d) The SS checks, that high data rate RBs have a high bit rate Transport Format.
- e) The SS reconfigures its RLC mode to be in AM RLC.
- f) Repeat step a) to e) repeat with different MAC logical channel priority (MAC priority of RB1 and RB2 set as 3, MAC priority of RB3 and RB4 set as 1).

1)The step a to k repeat with different MAC logical channel priority(MAC priority of RB1 and RB2 set as 3, MAC priority of RB3 and RB4 set as 1).

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
~~1~~		←	~~RADIO BEARER SET UP~~	~~Establish 2 uplink Radio and 2 Downlink Radio Bearer.~~
~~2~~		→	~~RADIO BEARER SET UP COMPLETE~~	
~~3~~		←	~~CLOSE UE TEST LOOP~~	~~Set up the loop back.~~
~~4~~		→	~~CLOSE UE TEST LOOP COMPLETE~~	
~~15~~				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode".
~~26~~	←		DATA BLOCKS	
~~37~~	→		LOOP BACK DATA BLOCKS	Read the Transfer Format of loop back data blocks, the high bit transfer format apply to the Radio Bearer with high MAC logical channel priority.
~~48~~				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode".
~~9~~		←	~~RADIO BEARER RELEASE~~	~~Releases the existing radio bearers.~~
~~10~~		→	~~RADIO BEARER RELEASE COMPLETE~~	
~~511~~				The step 1 to ~~410~~ shall be repeated with different MAC logical channel priority.

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RLC info	
- RLC mode	AM RLC
RB1 mapping info	
- MAC logical channel priority	4
- Downlink	
- Number of logical channels	1
- Downlink transport channel type	DCH
RB2 mapping info	
- MAC logical channel priority	4
- Uplink	
- Number of logical channels	1
- Uplink transport channel type	DCH
RB3 mapping info	
- MAC logical channel priority	2
- Downlink	
- Number of logical channels	1
- Downlink transport channel type	DCH
RB4 mapping info	
- MAC logical channel priority	2
- Uplink	
- Number of logical channels	1
- Uplink transport channel type	DCH
TFS	TF0 (1X366) TF1 (2X366) TF2 (4X366) TF3 (8X366)

7.1.10.1.5 Test requirements

The high bit rate TF is applied to high MAC logical channel priority Radio Bearer. That is, the bit rate of TF in RB4 should be not less than RB2.

7.1.11 Ciphering for transparent RLC

7.1.11.1 Ciphering

7.1.11.1.1 Definition and applicability

All UE.

7.1.11.1.2 Conformance requirement

Ciphering is performed in the MAC layer for transparent RLC mode.

Reference(s)

TS 25.301 subclause 5.3.1.2.

7.1.11.1.3 Test purpose

To verify that the ciphering is performed in the MAC layer for transparent RLC mode.

7.1.11.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters. Transparent Mode, Ciphering On.

User Equipment:

The UE shall operate under normal test conditions, Ciphering On.

The Test-USIM shall be inserted.

The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1). RRC Connection establishment procedure is completed as specified in TS34.108 7.1.2.

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

- a) ~~The SS sends RADIO BEARER SETUP to establish a downlink radio access bearer and an uplink radio access bearer with ciphering mode command as "Start", DTCH mapping to DCH and without multiplexing.~~
- b) ~~The UE response the RADIO BEARER SET UP COMPLETE.~~
- c) ~~SS sends CLOSE UE TEST LOOP.~~
- d) ~~b) The SS receives CLOSE UE TEST LOOP COMPLETE.~~

~~e)c)~~ The MAC entity of SS was configured as Ciphering mode as "Start" with CMAC_CONFIG-REQ primitive.

~~f)d)~~ SS configures its RLC entity sends CMAC_MAC_HEADER_REQ with disable_mac_header from CMAC_PCO and CRLC_CONFIG_REQ with RLC mode as "Transparent mode" from CRLC_PCO.

~~g)~~ The SS sends a DATA BLOCK from RLC PCO without MAC header.

~~e)~~ After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.

~~h)f)~~ The SS checks the returned loop back data blocks and compare it with the data block asw sent before out data.

~~i)~~ SS sends CMAC_MAC_HEADER_REQ with enable_mac_header from CMAC_PCO and CRLC_CONFIG_REQ with RLC mode as "AM mode" from CRLC_PCO.

~~m)~~ The SS sends to release the established uplink and downlink RBs.

~~n)~~ The SS receives RADIO BEARER RELEASE COMPLETE.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
~~1~~		←	~~RADIO BEARER SET UP~~	~~To establish a downlink Radio Bearer and an uplink Radio Bearer with transparent mode.~~
~~2~~		→	~~RADIO BEARER SET UP COMPLETE~~	
~~3~~		←	~~CLOSE UE TEST LOOP~~	
~~4~~		→	~~CLOSE UE TEST LOOP COMPLETE~~	
~~15~~				SS sends CMAC_CONFIG-REQ to set ciphering mode as "Start".
~~26~~				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
~~37~~		←	DATA BLOCKS	SS sends data blocks from downlink radio bearer, The data blocks is ciphered by SS and deciphered by UE.
~~48~~		→	LOOP BACK DATA BLOCKS	SS receives loop back data blocks from uplink radio bearer. The loop back data is ciphered by UE and deciphered by SS.
~~59~~				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
~~10~~		←	~~RADIO BEARER RELEASE~~	~~To release the uplink and downlink radio bearers.~~
~~11~~		→	~~RADIO BEARER RELEASE COMPLETE~~	

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
Ciphering mode info - Ciphering mode command - Ciphering algorithm RLC info - RLC mode RB mapping info -Downlink - Number of logical channels - Downlink transport channel type -Uplink - Number of logical channels - Uplink transport channel type	Start UEA 1, kasumi. Transparent RLC 1 DCH 1 DCH

7.1.11.1.5 Test requirements

The loop back data shall be identical to the data sent out by SS.

7.1.12 Control of RACH transmissions.

7.1.12.1 Access Service class selection for RACH transmission

7.1.12.1.1 Definition and applicability

All UE.

7.1.12.1.2 Conformance requirement

The following ASC selection scheme shall be applied, where NumASC is the highest available ASC number and MinMLP the highest logical channel priority assigned to one logical channel:

In case all TBs in the TB set have the same MLP, select $ASC = \min(\text{NumASC}, \text{MLP})$;

In case TBs in a TB set have different priority, determine the highest priority level MinMLP and select $ASC = \min(\text{NumASC}, \text{MinMLP})$.

Reference(s)

TS 25.321 subclause 11.2.1

7.1.12.1.3 Test purpose

To verify that MAC selection ASC correctly.

7.1.12.1.4 Method of test

Initial conditions

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted

The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1). RRC Connection establishment procedure is completed as specified in TS34.108 7.1.2.

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

Test procedure

- ~~a) The SS sends RADIO BEARER SETUP a downlink radio bearer and an uplink radio bearer with MAC Priority Level set as 4.~~
- ~~b) The UE sends RADIO BEARER COMPLETE.~~
- ~~c) SS sends CLOSE UE TEST LOOP.~~
- ~~d) The SS receives CLOSE UE TEST LOOP COMPLETE.~~
- ~~e) a) The SS configures its RLC entity for sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode", via CRLC_PCO.~~
- ~~f) b) The MAC entity in the SS side is configured with ASC as 4 via CMAC_CONFIG primitive.~~
- ~~g) c) The SS sends certain data blocks to UE.~~
- ~~d) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.~~
- ~~h) e) The SS receives the returned data blocks from the UE.~~
- ~~i) f) The MAC entity in SS side was reconfigured with ASC as any other data than 4.~~
- ~~j) g) The SS sends the next data blocks to UE.~~
- ~~k) h) The SS doesn't receives any data blocks from the UE within 30 seconds.~~
- ~~l) i) The SS configures its RLC entity for sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.~~
- ~~m) j) The SS sends RADIO BEARER RELEASE message to UE.~~
- ~~n) k) The UE sends RADIO BEARER RELEASE COMPLETE message to SS.~~
- ~~o) l) The procedure from a to n was repeated 3 times with MAC logical priority set as 3, 2, 1 and configure the ASC in system simulator as 3, 2, 1 accordingly.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
~~1~~	→		~~RADIO BEARER SET UP~~	~~Establishes a downlink Radio Bearer and an uplink Radio Bearer with MAC priority as 4.~~
~~2~~	←		~~RADIO BEARER COMPLETE~~	
~~3~~	→		~~CLOSE UE TEST LOOP~~	
~~4~~	←		~~CLOSE UE TEST LOOP COMPLETE~~	
~~15~~				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
~~26~~			CMAC_CONFIG-Req	SS sets the ASC as 4.
~~37~~	←		DATA BLOCKS	SS sends data blocks.
~~48~~	→		LOOP BACK DATA BLOCKS	SS shall receive the data block from UE.
~~59~~			CMAC_CONFIG-Req	SS sets the ASC as other value than 4.
~~610~~	←		DATA BLOCKS	SS sends data blocks.
~~711~~	→		LOOP BACK DATA BLOCKS	SS shall not receive the loop back data blocks from UE in 30s.
~~812~~				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
~~13~~	←		~~RADIO BEARER RELEASE~~	~~Releases the uplink and downlink RBs.~~
~~14~~	→		~~RADIO BEARER RELEASE COMPLETE~~	
~~915~~			Repeat Step ~~14~~ to step ~~813~~ shall be repeated 3 times with MAC Priority set as 3, 2, 1 and the ASC of SS set as 3, 2, 1 accordingly	

7.1.12.1.5 Test requirements

When the ASC in SS side match with the MAC priority, SS can receive the loop back data blocks, otherwise, The SS can't receive the loop back data blocks. This requirement applies to the different MAC priority.

7.1.12.2 Control of RACH transmissions for FDD mode

7.1.12.2.1 Definition and applicability

All UE.

7.1.12.2.2 Conformance requirement

MAC receives the following RACH transmission control parameters from RRC with the CMAC-Config-REQ primitive: maximum number of preamble ramping cycles Mmax.

When preamble transmission counter M larger than Mmax, then the procedure will stop and enter Error handling procedure.

Reference(s) TS25.321 11.2.2, TS25.321 Figure 11.2.2.1

7.1.12.2.3 Test purpose

To verify that the MAC entity controls RACH transmission correctly.

7.1.12.2.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

SS broadcast System Information 5 with Mmax in RACH transmission parameters set as 0.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

~~RRC connection establishment procedure is completed as specified in TS34.108 7.1.2. The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1).~~

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

The same as the initial conditions.

Test procedure

- ~~a) The SS sends RADIO BEARER SETUP to set up a downlink Radio Bearer with DTCH mapping to FACH and an uplink Radio Bearer with DTCH mapping to RACH.~~
- ~~b) The SS receives RADIO BEARER SETUP COMPLETE.~~
- ~~c) The SS sends CLOSE UE TEST LOOP.~~
- ~~d) The SS receives CLOSE UE TEST LOOP COMPLETE.~~
- ~~e) a) The SS configures its RLC entity for sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- ~~f) b) The SS sends certain DATA BLOCKS.~~
- ~~g) c) The SS can't shall not receive any LOOP BACK DATA BLOCKS in within 30s.~~
- ~~h) The SS sends RADIO BEARER RELEASE.~~
- ~~i) The SS receives RADIO BEARER RELEASE COMPLETE.~~

Expected sequence:

Step	Direction		Message	Comments
	UE	SS		
1		←	RADIO BEARER SET UP	To set up a downlink radio bearer with DTCH mapping to FACH and an uplink radio bearer with DTCH mapping to RACH.
2		→	RADIO BEARER SET UP COMPLETE	
3		←	CLOSE UE TEST LOOP	
4		→	CLOSE UE TEST LOOP COMPLETE	
15				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
26		←	DATA BLOCKS	
37				SS ~~can't~~ shall not receive loop-back returned data blocks within 30s.
48				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
9		←	RADIO BEARER RELEASE	
10		→	RADIO BEARER RELEASE COMPLETE	

7.1.12.2.5 Test requirements

The SS does not receive loop back data blocks from UE when $M_{\max}$ set as 0.

7.1.13 Control of CPCH transmissions.

7.1.13.1 Control of CPCH transmissions for FDD

7.1.13.1.1 Definition and applicability

All UE.

7.1.13.1.2 Conformance requirement

1.If counter M is not less than N_access_fails, the UE shall execute an access failure error procedure and the CPCH access procedure ends.

2. If the sum of the Frame Count Transmitted counter plus the number of frames in the next TTI is larger than NF_max, the UE shall exit the CPCH transmission procedure.

Reference(s) TS25.321 11.3

TS 25.214 clause 6.

7.1.13.1.3 Test purpose

To verify that the MAC entity control CPCH transmission correctly.

7.1.13.1.4 Method of test

Initial conditions

System Simulator:

1 cell, default parameters, Ciphering Off.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3 PDCP testing, clause "Setup a UE originated PS session using IP Header compression in AM RLC (using Loop back test mode 1). RRC connection establishment procedure is completed as specified in TS34.108 7.1.2.

Related ICS/IXIT Statement(s)

TBD

Foreseen Final State of the UE

The same as the initial conditions.

Test procedure

- ~~a) The SS sends RADIO BEARER SETUP to set a downlink Radio Bearer with DTCH mapping to DSCH and an uplink Radio Bearer with DTCH mapping to CPCH.~~
- ~~b) The SS receives RADIO BEARER SETUP COMPLETE.~~
- ~~c) The SS sends CLOSE UE TEST LOOP.~~
- ~~d) The SS receives CLOSE UE TEST LOOP COMPLETE.~~
- ~~e) a) The SS configures its RLC entity for sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- ~~f) b) The SS sends certain DATA BLOCKS to UE with UE-Id type, and UE-Id field.~~
- ~~c) After having received the data block via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.~~
- ~~g) d) The SS receives LOOP BACK returned DATA BLOCKS.~~
- ~~h) e) The SS configures its RLC entity for sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.~~
- ~~i) f) The SS starts the RB reconfiguration procedure by sending the sends RADIO BEARER RECONFIGURATION message with parameter: N_access_fails to 0.~~
- ~~j) The SS receives RADIO BEARER RECONFIGURE COMPLETE.~~
- ~~k) g) After having received the UE confirmation for the reconfiguration procedure, the SS configures its RLC entity for The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode" via CRLC_PCO.~~
- ~~l) h) The SS sends certain DATA BLOCKS.~~
- ~~m) i) The SS can't shall not receive any LOOP BACK DATA BLOCKS within 30s.~~
- ~~n) j) The SS configures its RLC entity for sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM mode" via CRLC_PCO.~~
- ~~o) k) The SS starts the RB reconfiguration procedure by sending the sends RADIO BEARER RECONFIGURATION message with parameter: NF_max equal to 0, and N_access_failure as 64.~~
- ~~p) l) The SS receives RADIO BEARER RECONFIGURE COMPLETE.~~
- ~~q) m) After having received the UE confirmation for the reconfiguration procedure, the SS configures its RLC entity for The SS sends CMAC_MAC_HEADER_REQ with disable_mac_header via CMAC_PCO,~~

and CRLC_CONFIG_REQ with RLC mode as "Transparent Mode", via CRLC_PCO. The SS sends DATA BLOCKS.

r) The SS sends certain DATA BLOCKS.

s) The SS ~~can't~~ shall not receive any returned LOOP BACK DATA BLOCKS within 30s.

t) The SS sends CMAC_MAC_HEADER_REQ with enable_mac_header via CMAC_PCO, and CRLC_CONFIG_REQ with RLC mode as "AM Mode" via CRLC_PCO. The SS sends DATA BLOCKS.

u) The SS sends RADIO BEARER RELEASE to release the downlink and uplink Radio Bearers.

v) The SS receives RADIO BEARER RELEASE COMPLETE.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	RADIO BEARER SET UP	Default value.
2		→	RADIO BEARER SET UP COMPLETE	
3		←	CLOSE UE TEST LOOP	
4		→	CLOSE UE TEST LOOP COMPLETE	
5				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
6		←	DATA BLOCKS	
7		←	LOOP BACK DATA BLOCKS	
8				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
9		←	RADIO BEARER RECONFIGURATION	Set N_access_fails as 0.
10		→	RADIO BEARER RECONFIGURATION COMPLETE	
11				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
12		←	DATA BLOCK	
13				The SS can't receive loop back data blocks from UE in 30s.
14				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
15		←	RADIO BEARER RECONFIGURATION	Set NF_max as 0 and N_access_fails as 64.
16		→	RADIO BEARER RECONFIGURATION COMPLETE	
17				SS sends CMAC_MAC_HEADER_REQ with disable_mac_header and CRLC_CONFIG_REQ with RLC mode as "Transparent mode".
18		→	DATA BLOCK	UE was triggered to send data block.
19				The SS can't receive data from UE in 30s
20				SS sends CMAC_MAC_HEADER_REQ with enable_mac_header and CRLC_CONFIG_REQ with RLC mode as "AM mode".
21		←	RADIO BEARER RELEASE	To release the downlink radio bearer and uplink radio bearers.
22		→	RADIO BEARER RELEASE COMPLETE	

Specific Message Contents

RADIO BEARER SET UP:

Information Element	Value/remark
RLC info	
- RLC mode	AM RLC
RB mapping info	
-Downlink	
- Number of logical channels	1
- Downlink transport channel type	CPCH
-Uplink	
- Number of logical channels	1
- Uplink transport channel type	CPCH
NF_max	64
N_access_fails	64

7.1.13.1.5 Test requirements

The SS can't receive data blocks from UE when N_access_fails or NF_max set as 0.